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AUTHOR Morse, Betty R.: And Others
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ABSTRACT

This report presents results of a project to provide useful information for planning pregnancy prevention programs. It focuses on five project objectives: (1) identification of factors associated with adolescent sexual behavior, contraceptive behavior, and pregnancy: (2) development of instructional objectives or skills associated with pregnancy prevention: (3) development and validation of the Needs Assessment Inventory for Teenage Pregnancy Prevention, a survey measuring approval of instructional objectives or skills for inclusion in an educational program for adolescents aged 13-15: (4) determination of approval for each skill cited in the instrument: and (5) determination of reaction to basic themes included in the inventory. Chapter 1 is an introduction. Chapter 2 concerns the research methodology, including the literature review for development of a data base and construction, pilot testing, and validation of the survey. Chapter 3 deals with findings and analysis. It discusses assessment of content validity and instrument reliability as well as determination of approval scores (objective 4) and of approval scores by subtests and groups (objective 5). Data tables are provided. The final chapter summarizes conclusions and recommendations. Appendixes, amounting to over two-thirds of the report, include the literature review, documentation of content validity for items, final survey instrument, and bibliography. (YLB)

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Final Report

Project No. DVE 9-1E11

From July 1978 to June 1979

Laying the Groundwork for an Interdisciplinary Effort Aimed at Prevention of Pregnancy Among Middle School Students

The University of West Florida
Pensacola, Florida

Betty R. Morse, Director

Anne D. Johnson, Research Coordinator

James R. Johnson, Research Associate

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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CE 026 916

PROJECT STAFF

Betty R. Morse, Ph.D., Director

Anne D. Johnson, Ph.D., Research Coordinator

James R. Johnson, Ph.D., Research Associate

Susan Ryan, M.S., Research Assistant

Rita Smith, B.S., Graduate Assistant

Other Staff Members

Terry Bush, Secretarial Staff

Lynn Butcher, Secretarial Staff

Renna Fowler, Secretarial Staff

Anita Hoskins, Secretarial Staff

Anne Peters, Secretarial Staff

Lucille Regan, Secretarial Staff

Jean Sprague, Secretarial Staff

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INTRODUCTION

Background of the Problem

A social problem that has reached alarming proportions is adolescent pregnancy. The increasing incidence and prevalence of pregnant adolescents are well-documented (Cutright, 1971; Zelnik and Kantner, 1976; Zelnik and Kantner, 1979). Each year, more than 600,000 adolescent women in the United States become mothers (Abernathy, 1974; Jaffe and Dryfoos, 1976). In 1975 alone, children born to teenagers less than 19 years of age constituted 19% of all births; 13,000 of the births recorded that year were to girls under 15 (Guttmacher Institute, 1976).

Researchers at the Alan Guttmacher Institute described the severity and scope of the problem:

> Early childbearing is increasing everywhere, is emerging as a serious problem in many countries, and has reached alarming levels in others (where it is associated) with serious health, socioeconomic and demographic implications for young women, young men, their offspring, and indeed, for the whole society... Adolescent pregnancy is a serious threat to the life and health of a young woman...whether the birth occurs in or out of marriage (The Alan Guttmacher Institute, 1976, p. 5).

The Institute report showed that each year more than one million 15 to 19 year old women become pregnant, amounting to 10% of the young women in this age group. Two-thirds of the pregnancies were shown to occur out-of-wedlock, and an estimated 300,000 infants were born annually to mothers below age 15.

Almost equally disturbing are data related to the outcomes of pregnancies of 15 to 19 year olds:

- 28% resulted in marital births that were conceived after marriage;
- 10% resulted in marital births that were conceived prior to marriage;
- 21% resulted in out-of-wedlock births;
- 27% were terminated by induced abortion;
- 14% resulted in miscarriage.
  (The Alan Guttmacher Institute, 1976, p. 10)

Among the 30,000 pregnancies among girls below 15, the following results were reported:

- 45% were terminated in abortion;
- 36% resulted in out-of-wedlock births;
- 6% resulted in marital births, mostly, conceived out-of-wedlock;
- 13% resulted in miscarriages.
  (The Alan Guttmacher Institute, 1976, p. 10)

Further, research confirms a number of medical risks associated with teenage pregnancy, including increased incidence of infant mortality, prematurity, and neurological impairments linked to prematurity. Pregnancies during adolescence frequently heighten the risk of maternal mortality and morbidity, respectively (Menken, 1972; Johnson, 1974; Walters, 1975; The Alan Guttmacher Institute, 1976; Trussel, 1976).

Besides the medical risks associated with adolescent pregnancy, a number of social and psychological consequences have been observed:

1. Interruption or termination of the parents' education, usually accompanied by a loss of earning power (Howard, 1971; Furstenberg, 1976; Moore and Waite, 1977; Card and Wise, 1978);
2. Lower academic potential expectations and achievement among children of adolescent parents (Digest, 1979);
3. Increased independence among youthful parents on public assistance and social welfare services (Kennedy, 1975; Hendrixson, 1979);
4. Increased societal expense associated with long-term institutional care required for neurologically and physically impaired children (Kennedy, 1975);
5. Increased probability of marital problems and divorce of teenaged parents caught in ill-considered marriages (Lorenzi, Klerman, and Jekel, 1977).

In recent years, researchers have investigated various aspects of the adolescent childbearing problem. Although much attention has been focused upon the problem of preventing pregnancy, approaches frequently seem to be reductionistic, stressing a single underlying explanation. Several researchers (Schinke and Gilchrist, 1977; Schinke, Gilchrist and Small, 1979) suggest an alternative approach:

> The literature reports adolescent pregnancy prevention as requiring more than knowledge and access to contraceptive methods. New skills, as well as new knowledge, are necessary to cope with bodily changes and changing societal expectations. Available data suggest that interpersonal communication may play an important role in determining sexual activity and contraceptive use among adolescents (Schinke and Gilchrist, 1977, p. 161).

Brief Review of the Literature

Given the broad dimensions of the problem of adolescent pregnancy, the review of literature was of critical importance in defining the problem as well as developing and justifying any skills associated with pregnancy prevention. The following major areas of related literature were investigated:

1. Cultural context of adolescent development, as well as the influence of families and schools.

2. Problems inherent in the development of an intervention program aimed at pregnancy prevention.

3. Frequency of behaviors and indication of interest in sexuality during childhood.

4. Parental and public attitudes toward family life education dealing with sex-related concepts.

5. Adolescent sexual behavior, contraceptive behavior, and pregnancy.

6. Psychosocial theory related to adolescent behavior and development.

(A comprehensive review of the literature is included as Appendix A.)

A summary of these findings include the following:

1. Change is occurring more rapidly than at any other time in our history (Spindler, 1965; Reich, 1970; Toffler, 1970). As society becomes more technologically advanced, periods of adolescence become longer with progressively earlier emergence of puberty and sexual drive (Cutright, 1971; Money and Tucker, 1975). With change, schools have assumed some of the responsibilities once belonging to the family, while peers have become increasingly important to youth (Conger, 1977).

2. No explicit cause and effect relationships associated with adolescent pregnancy have been established within any discipline. Probable factors associated with causes of adolescent pregnancy have emerged from a variety of fields (Plionis, 1975). An interdisciplinary approach to intervention programs undoubtedly offers the greatest potential for success; however, such an approach is only recently emerging (Chilman, 1978).

3. Sexual behavior is learned early in the child's life and all subsequent behavior is influenced by the formative experiences (Broderick, 1966; Elias and Gebhard, 1969; Vener and Stewart, 1974). The rising incidence of sexual dysfunction among adults (Masters and Johnson, 1969; Kaplan, 1974) and unintended pregnancy among adolescents (Jaffe and Dryfoos, 1976) provide mute testimony to the need for carefully constructed, positive family life and sex education programs at early ages.

4. The peer group has been the most significant source of information related to sex, particularly sexual activity, whereas schools, churches and parents have been the least common sources of information related to sexual activity (Martinson, 1968; Thornburg, 1970, 1972; Spanier, 1972).

5. Young adolescents are interested in sexual behavior as well as education related to sexuality (Kleinerman, Grossman, Breslow, and Goldman, 1971; Harnett, 1972; Rubenstein, Watson, and Drolette, 1976; Peretti, Carter, and McClinton, 1977). Sources of information related to sexuality for adolescents generally have been moralistic and lacking in information in which they were most interested (Rubenstein, Watson, and Rubenstein, 1977).

6. Parents support family life sex education in the public schools (Dearth, 1974; Conley and Haff, 1975; Potter and Smith, 1976) but are concerned about quality and content. They are reluctant to relinquish total responsibility for such education (Libby, Acock, and Pane, 1974). Schools responding to the needs of youth seem willing to provide such education, but desire public support in this endeavor. The concept of shared responsibility offers the greatest potential for this kind of education (Gordon, 1976).

7. Research findings to date in the area indicate increased frequency of adolescent intercourse with a decrease in mean age at which first intercourse occurs. Adolescents seem satisfied with their sexual activities (Sorenson, 1973; Vener and Stewart, 1974; Jessor and Jessor, 1975; Kantner and Zelnik, 1977). Patterns of sexual behavior most common among adolescents are a reflection of those patterns most common in the adult population (Hunt, 1974).

8. Current patterns of premarital sexual behavior are a product of many factors. Predominant among these are the influence of cultural norms and an individual's response to those influences in decisions about appropriate sexual behaviors within dating relationships. The decision-making process has been shown to be very complex as preferences for any given norm are influenced by socioeconomic class, religiosity, moral development level, and preferred sex role (Christensen and Gregg, 1970; Sorensen, 1973; Collins, 1974; Reiss, Banwart, and Foreman, 1975; D'Augelli and D'Augelli, 1977; Chilman, 1978; Cvetkovich, 1978).

9. During the last decade improvements have occurred in contraceptive practices of all age groups in the United States (Guttmacher Institute, 1977). Nonetheless, only 40% of all young women used contraceptives at the time of first intercourse. Frequency of contraceptive usage is influenced by age, race, and accessibility to clinics (Zelnik and Kantner, 1977; Dryfoos and Heisler, 1978). Effective contraceptive use among young women has been strongly linked to the use of medically prescribed methods of birth control (Zelnik and Kantner, 1978). Very few teenagers have intended to become pregnant (Jaffe and Dryfoos, 1976). Permissiveness with affection has been dominant among adolescents, but without commensurate concern for contraceptives.

10. Young people want their sexual experiences to be unplanned and spontaneous (Bender, 1973). In a culture where sexual activity among unmarried people is not fully condoned, premeditated sex with plans for the management of birth control seems morally unjustifiable, but spontaneous, unplanned sex that "just happens" is regarded as the more morally justifiable act (Bragonier, 1973; Scales, 1977). Guilt associated with sexual behavior seems to interfere with retention of birth control information as well as birth control usage (Schwartz, 1973; Reiss, Banwart, and Scales, 1975). High orientations to roles of wife and mother are related to inconsistent contraceptive use (Rainwater, 1968; Jekel, Harrison, Bancroft, Tyler, and Klerman, 1975). Large numbers of adolescents agree to the concept of sexual responsibility but do not seem to be able to carry out the responsibility (Bender, 1973).

11. Birth control clinics are a major source of contraceptive services for teenagers in the United States (Guttmacher Institute, 1975). Although many adolescents inform their parents of clinic attendance, close to half do not and would not go to clinics if their parents were informed (Torres, 1978). The use of medically prescribed methods of birth control requires informed consent on the part of the adolescent patient (Hatcher, Stewart, Stewart, Guest, Stratton, and Wright, 1978). Upon arrival at

clinics teenagers typically do not have adequate information related to birth control (Reichelt and Werley, 1975). Part of the function of an effective school-based pregnancy prevention program will be the articulation of accurate information about birth control and agencies providing birth control services (Goldsmith, Gabrielson, Gabrielson, Mathews, and Potts, 1972).

12. Adolescent pregnancy results in high risks for the parents in terms of educational and career opportunities, as well as in stability to marriage and family relationships (LaBarre, 1968; Furstenberg, 1976; Guttmacher Institute, 1976; Lorenzi, 1977). Medical risks of pregnancy to some adolescent women have been high while the teen years appear to be a good time for childbearing for others (Johnson, 1974; Jekel, Harris, Bancroft, and Tyler, 1975). Medical risks to neonates have been high in terms of low birth weights, prematurity, and neonatal mortality, as well as physical development during the first year (Osofsky, Osofsky, Kendall, and Rajan, 1973; Guttmacher Institute, 1976).

13. Factors influencing adolescent pregnancy are difficult to isolate. The decrease in mean age of menarche among adolescent women and a concomitant decrease in the length of the period of teenage sterility and fetal mortality account for significant increases in birth rates among adolescents. The most significant predictor of adolescent pregnancy is failure to use birth control in the previous month (Zelnik and Kantner, 1977). No strong direct link between cultural permissiveness and adolescent pregnancy has been established (Christensen, 1958; Cutright, 1971; Chilman, 1978). Support welfare programs do not act as incentives to unwed pregnancy; instead, these programs enable unmarried women to keep their babies rather than place them for adoption (Cutright, 1971; Presser, 1974; Ross and Sawhill, 1975; Moore and Caldwell, 1977; Chilman, 1978). Psychological deficiency among pregnant adolescents does occur but cannot be considered a predominant cause of adolescent pregnancy (Vincent, 1961; Pope, 1967; Moore and Caldwell, 1977). Among indigent young women from large families, late sex education from an acquaintance and poor academic performance are significant predictors of pregnancy (Goldfarb, Mumford, Schum, Smith, Flowers, and Schum, 1977).

14. The work of theorists in adolescent development is pertinent to the development of skills associated with pregnancy prevention. Piaget (1954), Erikson (1956), and Kohlberg (1969), have formulated theories of cognitive, ego and moral development to explain patterns of growth among adolescents. In a related sense, Opler (1971) has postulated a theory that discusses the influence of the adolescent peer culture in shaping

cognitive, moral, and social development decisions. The work of such theorists can be related to problems of adolescent pregnancy (Hatcher, 1973) and suggests clear mandates for educational programming in pregnancy prevention.

Any approach to pregnancy prevention education requires attention to a multitude of factors associated with sexual behavior, contraceptive behavior, and adolescent pregnancy, as well as to the cultural context of these behaviors and the developmental characteristics of the young people involved. Given these factors, educational programs must be planned according to what is acceptable to parents and the public.

Project Objectives

The purpose of this project was to lay the groundwork for an interdisciplinary educational effort aimed at the prevention of pregnancy among young adolescents. Toward this goal, we fulfilled the following project objectives:

1. Identification of factors associated with adolescent sexual behavior, contraceptive behavior, and pregnancy through a search of the literature.

2. Development of instructional objectives or skills associated with pregnancy prevention based on literature review.

3. Development and validation of a survey instrument, entitled Needs Assessment Inventory for Teenage Pregnancy Prevention, which measures approval of instructional objectives or skills for inclusion in an educational program for adolescents aged 13 to 15.

4. Determination of approval for each skill cited in the instrument.

5. Determination of reaction to basic themes included in the inventory (Changing Bodies and Medical Concerns, Values Clarification, Decision-making, Family Relationships, Interpersonal Relationships, and Role Development) among surveyed sample groups.

Scope of the Project

In order to fulfill project objectives we implemented several processes. We utilized Havighurst's model of developmental tasks as an organizational framework for a series of instructional objectives or items included in the Needs Assessment Inventory for Teenage Pregnancy Prevention. Content validity of the instrument was established through a literature review on adolescent behavior and was

supported through interviews with three groups of adolescent women. We conducted the pilot test of the instrument using three sample groups: (1) students and parents serving as members of a superintendent's advisory committee; (2) professionals working on the problem of teenage pregnancy; and (3) Florida citizens selected randomly from nine of the largest cities.

Assumptions and Limitations

Assumptions. In any research project, certain assumptions must be made as part of the conceptual basis of the investigation. In the present study we acknowledge the following assumptions:

1. The interview technique offers the advantages of in-depth probing and flexibility in eliciting information related to adolescent sexual behavior.

2. Given the highly personal nature of a respondent's replies to questions of individual sexual behavior and attitudes, the interview technique provides the most reliable device for reducing subject anxiety and obtaining accurate data.

3. A structured interview guide may be organized to sample attitudes on a written questionnaire.

4. There are educational objectives that would enable young adolescents to prevent pregnancy.

5. Attitudes may be measured by self-report questionnaires.

6. Use of a large number of items to construct an attitude assessment device reduces instrument instability related to an individual item.

7. The Needs Assessment Inventory for Teenage Pregnancy Prevention measured one variable: the degree of approval of instructional objectives or skills associated with prevention of pregnancy.

8. Havighurst's developmental tasks (1973) provide a viable construct for identifying the critical knowledge and behaviors associated with adolescent development.

9. Attitudes may be inferred by expressions of opinion.

10. The linear model of measurement is correct.

Limitations. We acknowledge certain environmental, design, and human limitations:

1. The sample of interview respondents used in content validity estimation were volunteers who were either pregnant and receiving services from a community agency for pregnant adolescents or were in contact with a family planning agency for birth control information. To this degree, the sample was biased and non-random. Sources of bias were anticipated as a consequence of a subject's willingness to be interviewed for one hour on personal sexual matters.

2. The number of adolescent women (N = 21) interviewed was small, reducing generalizability to the population which they represent.

3. In the main study, the student and parent sample group was biased in that they were volunteers, a non-random selection, and members of an intact school superintendent's advisory committee. Students and parents in this group, while sharing many attitudes and characteristics with teenagers and parents in Orange County, may be considered atypical in other characteristics.

4. In the main study, the mail sample to 474 randomly selected Florida residents was limited in the following ways:

   a. A large number of questionnaires were not returned.

   b. Only residents listed in the 1978 telephone directories of Florida's ten largest cities were included.

   c. The response rates were not consistent across the cities, and since interpretation must be based on available data, those cities with the higher rates had increased influence on the interpretation of the data.

5. The linearity of the ranking scale employed in the development of the instrument provided for statistical simplicity, while intensity of a subject's response could have been greatest at either end of the scale.

6. Respondents' approval of objectives associated with pregnancy prevention was likely to be associated with other beliefs, attitudes, and personality factors.

7. The opinions identified by the Needs Assessment Inventory for Teenage Pregnancy Prevention were not infallible guides to a respondent's attitudes. This would tend to contribute to errors in prediction when measured attitudes are used as predictors of human behavior.

8. Behavior associated with pregnancy prevention may be holistic in nature.

Despite limitations, the results of the study provide useful information for planning pregnancy prevention programs. The practicality and reception of the Needs Assessment Inventory for Teenage Pregnancy Prevention have been established by review procedures and pilot testing. The instrument was reviewed by a reading specialist; a group of home economics teachers, consultants, county supervisors, and vocational administrators; and a national advisory group composed of recognized leaders in education. Respondents who participated in the pilot test would have little to gain by faking responses to the inventory. Thus, it is relatively safe to assume the validity of the responses. The number of returned questionnaires obtained in the main study is sufficient to provide statistical stability.

Another strength of the study lies in the fact that the competencies or skills identified for individual items in the instrument were drawn from literature using interdisciplinary sources. The scholarly literature included both primary and secondary sources.

METHODOLOGY

Development of Data Base

Our research focused on the broad goal of constructing, pilot-testing, and validating an instrument to measure public approval of instructional objectives (skills) associated with pregnancy prevention among young adolescents. Step one required an extensive review of the literature related to the problem (Appendix A). Besides providing additional data for a precise statement of the problem, our literature search sought to: (1) delimit the research problem, (2) provide insight into appropriate research methods, and (3) sample current opinions on adolescent pregnancies and their prevention. The latter objective was germane to the construction of a needs assessment instrument consisting of potential instructional objectives associated with pregnancy prevention.

Our review of the literature showed that explicit cause and effect relationships relative to adolescent pregnancies have not been defined. Further, few investigators have studied attitudes of teenagers who have purposefully or inadvertently avoided becoming pregnant.

Instrument Development

Steps two and three required development of instructional objectives or skills based on literature review as well as development and validation of a survey instrument, entitled Needs Assessment Inventory for Teenager Pregnancy Prevention, which measures approval of instructional objectives or skills for inclusion in an educational program for adolescents aged 13 to 15.

The instrument was developed in the following manner:

1. Selection of a defensible construct for the identification of educational objectives (behaviors);

2. Development of a pool of objectives consistent with the construct;

3. Determination of reliability (internal consistency) in response to the items on the instrument prior to pilot testing;

4. Verification of the readability and the content validity of potential items.

The review of literature demonstrated that the acquisition of sexual knowledge is a developmental process extending beyond formal education and adolescent years. Therefore, our research team determined that objectives must be based upon a broad theory of human

development that considers both the physiological and psychological causes of adolescent sexual behavior. Robert Havighurst's theory of developmental tasks (1973) was determined to be an appropriate base for a series of developmental tasks relevant to various stages. Successful achievement of each task is related to the individual's happiness and to success with subsequent tasks. Failure to achieve or resolve a particular task can cause unhappiness, and is usually accompanied by societal disapproval and problems in performing subsequent tasks. Havighurst provides a biological, psychosocial, and cultural justification for each task and identifies appropriate educational implications. Developmental tasks for the period of middle childhood were selected as the organizational construct for objectives for our instrument.

Each developmental task was translated into a goal statement and further refined into a theme. Both goals and themes were used to identify sets of relevant potential behaviors that could be subsumed under Havighurst's tasks. Individual educational objective statements were then formulated for the tasks, goals, and themes (Figure 1).

The items were selected with attention to both the range of themes and goals implied by Havighurst's tasks, but also were generated according to an increasing cognitive/moral developmental loading. Cognitive demand of students ranged from simple memory of sexual-related content to more complex decisions about the potential consequences of a given sex-related behavior.

Instrument Review. After the 87 items were developed, the instrument was evaluated by a reading specialist to ascertain that no item was phrased in language beyond the seventh grade reading level. No readability formula was found to be applicable to test items; therefore, the consultant carefully reviewed each item and suggested changes to simplify wording and clarify meaning.

In March, 1979, the preliminary instrument was reviewed by a group of 33 home economics teachers, consultants, county supervisors, and vocational administrators from the State of Florida. Each respondent was invited to rate his/her acceptance of each potential objective on a rating scale of 1 to 7 and to offer general comments on the instrument. Scores of 1 indicated extreme lack of acceptance of the objective, while higher scores were used to indicate an increasing level of acceptance for each objective. Mean scores and standard deviations were computed for each item of the test. Because the real limits of scores 6 and 7 extend from 5.5 to 7.5, the research team set 5.5 as the minimal level of acceptance for each objective. Based upon the scores yielded from this review procedure, five items were judged unacceptable. Three were dropped from the test and the wording of two others was changed.

Subsequent to review by the group of Florida educators, the instrument was presented to a national advisory group, composed of recognized leaders in home economics education, sociology, human development, or educational research (Appendix E). The group was

1. Developmental Task: Building Wholesome Attitudes Toward Oneself as a Growing Organism.

   Goal: To acquire and manage a wholesome set of attitudes and behaviors about sex.

   Theme: Changing Bodies and Medical Concerns.

2. Developmental Task: Developing Conscience, Morality, and a Scale of Values.

   Goal: To develop a set of values that enables deliberate decision-making with full understanding of alternatives and consequences in social and sexual situations.

   Theme: Values Clarification.

3. Developmental Task: Achieving Personal Independence.

   Goal: To develop skill in use of a rational decision-making process with responsibility for consequences of actions.

   Theme: Decision-making.

4. Developmental Task: Developing Attitudes Toward Social Groups and Institutions.

   Goal: To integrate individual and personal social pressures with the needs of the family.

   Theme: Family Relationships.

5. Developmental Task: Learning To Get Along With Age Mates.

   Goal: To acquire the skills requisite for social life and effective communication among friends and peers.

   Theme: Interpersonal Relationships.

6. Developmental Task: Learning an Appropriate Masculine or Feminine Social Role.

   Goal: To acquire an understanding of the wide range of role behaviors and their possible consequences.

   Theme: Role Development.

Figure 1. Construct for item generation in the development of the Needs Assessment Inventory for Teenage Pregnancy Prevention.

supportive of the instrument design and research effort and suggested that items using the word "discuss" be revised employing more precise and definitive action verbs. Thus, 23 items were changed.

Several other changes in the pilot instrument were made in response to suggestions of The University of West Florida administrators and staff. The word "objectives" used in the initial draft to refer to individual items was changed to "skills" in the revised instrument. Additionally, respondents were asked in the original form of the instrument to indicate a degree of "acceptability" for each objective (skill). In the final version, "acceptability" was changed to "approval."

A preliminary estimate of the reliability of the instrument was obtained by the Coefficient Alpha, which is a generalization of the Kuder-Richardson 20 formula (Nunnally, 1972). This estimate was computed using the group of 33 Florida home economics teachers and administrators. The resultant coefficient of .96 indicated a high degree consistency in the responses of items in the instrument.

Content Validity. Content validity of the instrument was established by two procedures. As indicated above, each item was tested or strongly recommended as relevant to adolescent pregnancy prevention in at least three sources of scholarly literature. (A brief justification for each item with supportive scholarly sources are given in Appendix B).

As a second means of validating the instrument, a counselor interviewed a sample of 21 adolescents who were: (1) pregnant, (2) sexually active, and not pregnant, but seeking contraceptive information, and (3) not sexually active, but seeking contraceptive information. The questions used in the interview schedule were matched with the skills included in the Needs Assessment Inventory for Teenage Pregnancy Prevention. Differences noted between the attitudes and behaviors of group 1 (who had already become pregnant) and groups 2 or 3 (who either were sexually active but not pregnant or not sexually active), were considered evidence of content validity and support for inclusion in the instrument.

Interview Sampling Procedures. The adolescents used in the study were all volunteers from a community agency supporting pregnant adolescent girls and a major family planning agency in northwest Ohio. Subjects were from 12 to 18 years of age. The young women interviewed were identified in the following subgroups for comparison purposes (Figure 2).

Group	n	Characteristics
1	7	Currently or recently pregnant and affiliated with a community agency
2	6	Sexually active, not pregnant, seeking contraceptive information from a family planning agency
3	8	Not sexually active, seeking contraceptive information from a family planning agency

Figure 2. Groups of Young Women Interviewed During Validity Confirmation of Needs Assessment Inventory for Teenage Pregnancy Prevention.

Interview Techniques. To obtain a profile of the sexuality attitudes, knowledge and behaviors of our subjects, questions were carefully linked to the themes and concepts included in the instrument. The interview questionnaire was modeled on previous work in the field (Kinsey, 1948; Kahn and Cannell, 1957; Committee on Medical Education, 1973; Sorensen, 1973; and Furstenberg, 1976). The interview questionnaire used the following guidelines:

1. The interview questions were structured in chronological order;

2. Questions moved from less personal to more personal topics;

3. Questions were structured so that the respondent's knowledge of each technical term was evaluated in advance and clarified if necessary;

4. Questions were worded nonjudgmentally and in such a manner that all behaviors of interest were assumed to have occurred.

The interviewer, a skilled counselor and licensed sexual therapist, followed a standard format. If the interviewee experienced or manifested signs of tension or high anxiety, the interviewer was instructed to terminate the interview strategy immediately and return to the topic of concern, stating, "You seemed troubled...," inserting the appropriate response. Thus, the interviewer used neutral interview techniques but changed to a therapeutic mode when necessary.

Data Analysis for Content Validity. Content validity was determined by differences among three groups of adolescent women:

1. Young women already pregnant and affiliated with a community agency;

2. Young women sexually active and seeking contraceptive information;

3. Young women not sexually active and seeking contraceptive information.

Data related to each of the major themes were collected and differences among groups were noted in frequencies and percentages.

Reliability. Reliability of the instrument was determined using the Coefficient Alpha, a generalization of the Kuder-Richardson 20 to determine consistency of response to the items on the instrument (Nunnally, 1972). Pearson product moment correlations were computed between mean item scores and mean total test scores to determine whether any item had induced a pattern of response among subjects that would weaken the test reliability. Reliability coefficients were generated on the basis of pilot test data.

Pilot Test Sample. Our research team sampled three important groups who have an interest in the adolescent pregnancy problem. To sample selected student and parent attitudes toward skills believed to be associated with pregnancy prevention, the research team obtained the cooperation of the superintendent of schools in Orange County, Florida. District school administrators, already studying appropriate curricular responses to the rising incidence of adolescent pregnancy, agreed to allow the needs assessment instrument to be administered to a superintendent's advisory group composed of 18 students and 6 parents. These groups were intact and in no way could be construed to be a random sample of Orange County adolescents and parents.

A second group with a vested interest in adolescent pregnancy was composed of an ad hoc committee of Pensacola community professionals who provide services to pregnant adolescents in clinics, hospitals, family planning agencies, and community agencies for pregnant teenagers. To obtain the insight and judgment of this group, we surveyed 48 such professionals in the Pensacola area. Responses of 35 subjects comprised the second group.

The third group represented the general community of citizens who support public education and social welfare programs through tax dollars. A random sample of 474 names was drawn from the telephone directories of nine of Florida's largest cities, excluding Orlando (site of the advisory group). The number of names sampled by city was proportionate to the estimate of general population residing in each city in 1976. The number of respondents by city are represented in the figure below:

City	Population Estimate (1976)	Sample Size	Number of Returns
1. Jacksonville	550,801	131	17
2. Miami	343,977	82	9
3. Tampa	278,829	69	2
4. St. Petersburg	236,923	56	13
5. Ft. Lauderdale	152,791	36	6
6. Hialeah	126,125	30	1
7. Hollywood	118,872	28	2
8. Miami Beach	88,661	21	1
9. Tallahassee	86,190	21	4

Figure 3. The Number of Respondents in Cities Sampled.

Each respondent was sent a copy of the questionnaire, a cover letter explaining the purpose of the research from the University of West Florida Vice President of Academic Affairs, and a postpaid return envelope (Appendix E). Seven days after the first mailing, each respondent received a postcard urging the return of a completed questionnaire as soon as possible.

The random sample covered most of the geographical regions of Florida. Most responses came from Jacksonville and St. Petersburg, while very few were returned from the heavily populated areas of Miami, Miami Beach, and Hileah. Although the response pattern was puzzling, no biases could be identified.

Approval of Objectives and Reaction to Themes

Steps four and five called for determination of approval for each objective or skill cited in the instrument and determination of reaction to basic themes included in the inventory: Changing Bodies and Medical Concerns, Values Clarification, Decision-making, Family Relationships, Interpersonal Relationships, and Role Development.

Using responses of all subjects in the pilot sample groups, mean approval scores and standard deviations were calculated for each skill cited on the Needs Assessment Inventory for Teenage Pregnancy Prevention. To determine reaction to basic themes or subtests, mean scores for each of the groups were generated using items for the subtests:

Changing Bodies and Medical Concerns (Items 1, 4, 11, 17, 22, 26, 28, 31, 37, 40, 46, 47, 57, 59, 61, 65, 68, 70, 82)

Values Clarification (Items 3. 5, 10, 30, 34, 36, 54, 58, 71, 73, 81)

Decision-making (Items 2, 9, 23, 27, 38, 42, 43, 45, 48, 51, 60, 63, 66, 67, 76, 78, 79, 83)

Family Relationships (Items 15, 16, 20, 55, 56, 72, 80)

Interpersonal Relationships (Items 7, 12, 13, 21, 25, 29, 33, 39, 44, 50, 52, 53, 62, 74, 75)

Role Development (Items 6, 8, 14, 18, 19, 24, 32, 35, 41, 49, 64, 69, 77, 84)

Analysis of variance determined differences in mean scores by subgroups with Duncan's multiple range post-hoc analysis to locate sources of significant difference.

FINDINGS AND ANALYSIS

Content Validity

The Needs Assessment Inventory for Teenage Pregnancy Prevention was developed from a pool of items identified in a review of the literature. Content validity of the instrument was ensured by including only those items which received support in three scholarly sources as being factors associated with the prevention of pregnancy among young adolescents (Appendix B).

The content validity was further assessed by interviews with three small groups of adolescent women:

Pregnant adolescents affiliated with an agency offering support services to pregnant adolescents. (n = 7)

Sexually active adolescents seeking information from a family planning clinic. (n = 6)

Nonsexually active adolescents seeking information from a family planning clinic. (n = 8)

Questions based on the themes in the needs assessment inventory were asked of each respondent. Knowledge related to Changing Bodies and Medical Concerns was measured among all three groups by asking for definitions of the terms "uterus" and "vagina (Table 1)."

Table 1

PERCENTAGES OF PREGNANT, SEXUALLY ACTIVE, AND NONSEXUALLY ACTIVE ADOLESCENTS DEFINING UTERUS AND VAGINA CORRECTLY

Definitions	Pregnant Adolescents	Sexually Active Adolescents	Nonsexually Active Adolescents
Defined Uterus Correctly	57% (n=4)	67% (n=4)	0% (n=0)
Defined Vagina Correctly	14% (n=1)	14% (n=1)	0% (n=0)

We conclude that levels of sexual knowledge among these women are low and differences in knowledge are not significant predictors of pregnancy or sexual activity. Interestingly, the women who demonstrated the least sexual knowledge (nonsexually active adolescents) had gone to a family planning clinic to get additional information.

To identify sources of information about contraception, all adolescents responded to the question: "How did you first learn about birth control? (Table 2)."

Table 2

PERCENTAGES OF ADOLESCENT'S FIRST SOURCES OF KNOWLEDGE ABOUT BIRTH CONTROL

Sources of Birth Control Knowledge	Pregnant Adolescents	Sexually Active Adolescents	Nonsexually Active Adolescents
Mother	43% (n=3)	17% (n=1)	25% (n=2)
Father	0% (n=0)	0% (n=0)	13% (n=1)
Siblings	14% (n=1)	17% (n=1)	0% (n=0)
Friends	0% (n=0)	33% (n=2)	50% (n=4)
Book	0% (n=0)	17% (n=1)	0% (n=0)
School	29% (n=2)	0% (n=0)	0% (n=0)
Doctor	0% (n=0)	0% (n=0)	0% (n=0)
Church	0% (n=0)	0% (n=0)	0% (n=0)
Family Planning Agency	14% (n=1)	17% (n=1)	13% (n=1)
Boyfriend	0% (n=0)	0% (n=0)	0% (n=0)

Our research team concludes that no consistent source of birth control information exists for the three groups of adolescents. We also conclude that the peer group failed to provide any birth control information to these pregnant adolescents. Schools, doctors, churches, and family planning agencies generally are not cited as first sources of birth control information for any of the three groups of adolescents.

We submit that low levels of knowledge related to reproductive physiology and inconsistency of sources of birth control information found in all three groups lend support for including Changing Bodies and Medical Concerns in pregnancy prevention programs.

Values Clarification was a major variable considered. Adolescent women in all three groups were asked if they agreed or disagreed with statements related to sexual values (Table 3).

We conclude that all three groups of youth share similar values. Virtually all felt that sex between partners who intend to marry was permissible for boys and girls. Most subjects in all three groups approve of engaging in sex if there is affection even without the intention of marriage. Further, most subjects in all three groups disapprove of either boys or girls having sex with a partner whom they did not know well. These findings are consistent with those of Sorensen (1973), who found that young people believe in situation ethics. Young women in these three groups do not agree that sex was more for procreation than pleasure. Thus, on the basis of this limited data, we conclude that the dominant values of the adolescent women in these three groups are not different and are not predictors of sexual behavior. These findings justify neither inclusion or exclusion of Values Clarification in pregnancy prevention programs.

To identify attitudes related to discussion of sex, adolescents in all three groups responded to statements given in Table 4.

Table 3

PERCENTAGES OF PREGNANT, SEXUALLY ACTIVE AND NONSEXUALLY ACTIVE ADOLESCENTS AGREEING WITH VALUE STATEMENTS

Value Statements	Pregnant Adolescents	Sexually Active Adolescents	Nonsexually Active Adolescents
I believe that it is all right for a young man to have sex with someone if he plans to marry.	71% (n=5)	100% (n=6)	75% (n=6)
I believe that it is all right for a young woman to have sex with someone she loves and plans to marry.	86% (n=6)	100% (n=6)	100% (n=8)
I believe that it is all right for a young man to have sex with someone he loves but does not plan to marry.	100% (n=7)	67% (n=4)	75% (n=6)
I believe that it is all right for a young woman to have sex with someone she loves but does not plan to marry.	100% (n=7)	67% (n=4)	75% (n=6)
I believe that it is all right for a young man to have sex with a close friend.	43% (n=3)	33% (n=2)	38% (n=3)
I believe that it is all right for a young woman to have sex with a close friend.	14% (n=1)	33% (n=2)	50% (n=4)
I believe that it is all right for a young man to have sex with someone he likes even though he does not know her well.	14% (n=1)	17% (n=1)	0% (n=0)
I believe that it is all right for a young woman to have sex with someone she likes even though she does not know him well.	14% (n=1)	17% (n=1)	0% (n=0)

Table 4

ATTITUDES TOWARD DISCUSSION OF SEX OF PREGNANT, SEXUALLY ACTIVE AND NONSEXUALLY ACTIVE ADOLESCENTS

Attitudes Toward Discussion of Sex	Pregnant Adolescents	Sexually Active Adolescents	Nonsexually Active Adolescents
I believe that it is all for dating partners to talk about sex before they have sex.	100% (n=7)	83% (n=5)	100% (n=8)
I believe that sex between dating partners should be unplanned and spontaneous.	14% (n=1)	33% (n=2)	25% (n=2)

We conclude that most adolescents interviewed (regardless of previous sexual activity) believe it is all right to discuss sex before having sex.

To describe communication about first sexual intercourse, pregnant and sexually active adolescents responded to the question: "With whom did you discuss your first intercourse? (Table 5)."

Table 5

PERCENTAGES OF PREGNANT AND SEXUALLY ACTIVE ADOLESCENTS WHO DISCUSS INTERCOURSE

Discussant	Pregnant Adolescents	Sexually Active Adolescents
Mother	0% (n=0)	0% (n=0)
Father	0% (n=0)	0% (n=0)
Siblings	0% (n=0)	0% (n=0)
Friends	14% (n=1)	17% (n=1)
Boyfriend/partner	29% (n=2)	83% (n=5)
Counselor	0% (n=0)	0% (n=0)
Teacher	0% (n=0)	0% (n=0)

We conclude that sexually active adolescent women do not discuss their first intercourse with family members. Likewise, they generally do not discuss intercourse with friends. Sexually active adolescents attending clinics discuss intercourse with partners more frequently than pregnant adolescents.

To evaluate decision-making, pregnant and sexually active adolescents were asked to cite factors related to:

1. Personal concerns before first intercourse;

2. Conversation with partner before first intercourse (Table 6).

Table 6

PERCENTAGES OF PREGNANT AND SEXUALLY ACTIVE ADOLESCENTS WHO THOUGHT ABOUT AND DISCUSSED FACTORS WITH PARTNERS BEFORE FIRST INTERCOURSE

Factors	Pregnant Adolescents		Sexually Active Adolescents	
	Thought About	Discussed With Partner	Thought About	Discussed With Partner
Breaking hymen	0% (n=0)	0% (n=0)	0% (n=0)	0% (n=0)
Getting caught	71% (n=5)	29% (n=2)	33% (n=2)	50% (n=3)
Getting VD	14% (n=1)	14% (n=1)	0% (n=0)	0% (n=0)
Getting pregnant	57% (n=4)	29% (n=1)	83% (n=5)	67% (n=4)
Pleasing myself	0% (n=0)	0% (n=0)	0% (n=0)	0% (n=0)
Pleasing my partner	0% (n=0)	0% (n=0)	50% (n=3)	0% (n=0)
Loving my partner	0% (n=0)	0% (n=0)	33% (n=2)	17% (n=1)
All	0% (n=0)	0% (n=0)	0% (n=0)	0% (n=0)

Although most adolescents believe it is all right to talk about sex before intercourse, most do not discuss significant factors associated with sexual activity before having coitus with partners. We suggest that this may represent an inconsistency between adolescent belief and behavior.

We condlude that none of the respondents in either group consider all factors cited above prior to sexual intercourse. We further conclude that fear of being caught is not a sufficient motive for preventing pregnancy; in fact, it may contribute to the pregnancy itself. Fear of being pregnant coupled with a lack of fear of being caught, on the other hand, seems related to contraceptive use.

We suggest that these data lend support for classroom discussions related to reasons for and outcomes of adolescent information.

As a further measure of decision-making, subjects were asked to identify good reasons for having intercourse (Table 7).

Table 7

PERCENTAGES OF PREGNANT, SEXUALLY ACTIVE, AND NONSEXUALLY ACTIVE ADOLESCENTS IDENTIFYING EACH FACTOR AS A GOOD REASON FOR INTERCOURSE

Good Reasons for Intercourse	Pregnant Adolescents	Sexually Active Adolescents	Nonsexually Active Adolescents
Wanting to please my partner	43% (n=3)	33% (n=2)	50% (n=4)
Wanting to improve the relationship	29% (n=2)	50% (n=3)	50% (n=4)
Wanting to be an adult	14% (n=1)	0% (n=0)	13% (n=1)
Wanting to be close physically and emotionally	57% (n=4)	67% (n=4)	38% (n=3)
Feeling sexually excited	100% (n=7)	50% (n=3)	13% (n=1)
Wanting to be independent of parents	0% (n=0)	0% (n=0)	13% (n=1)
Wanting to show love for the other person	43% (n=3)	83% (n=5)	63% (n=5)
Wanting to do what peers are doing	0% (n=0)	0% (n=0)	0% (n=0)
Wanting to do what is expected	29% (n=2)	0% (n=0)	0% (n=0)
Wanting to prove self as a good sexual partner	29% (n=2)	17% (n=1)	25% (n=2)

Our research team finds differences in good reasons for intercourse emerging twice. All pregnant adolescents saw sexual excitement as a good reason for intercourse. More sexually active and nonsexually active adolescents apparently view the desire of wanting to show love for another person as a good reason for intercourse than the pregnant adolescents.

We conclude that discussing reasons for intercourse may be valuable in pregnancy prevention.

As a last means of measuring decision-making, all subjects were asked if they agreed with a series of statements relating to responsibility for birth control (Table 8).

Table 8

PERCENTAGES OF PREGNANT, SEXUALLY ACTIVE, AND NONSEXUALLY ACTIVE ADOLESCENTS AGREEING WITH STATEMENTS RELATED TO RESPONSIBILITY OF BIRTH CONTROL

Statements	Pregnant Adolescents	Sexually Active Adolescents	Nonsexually Active Adolescents
I believe that birth control is the boy's responsibility	14% (n=1)	0% (n=0)	25% (n=2)
I believe that birth control is the girl's responsibility	43% (n=3)	33% (n=2)	50% (n=4)
I believe that both boys and girls have 50-50 equal responsibility for birth control	86% (n=6)	100% (n=6)	88% (n=7)
I believe that it is all right for boys to get birth control before they have sex	86% (n=6)	100% (n=6)	88% (n=7)
I believe that it is all right for girls to get birth control before they have sex	86% (n=6)	83% (n=5)	100% (n=8)

We conclude that most adolescents in the three groups believe that birth control is a shared responsibility and that it is all right for either boys or girls to get birth control devices before having sex. The belief that birth control is a shared responsibility of boys and girls, coupled with infrequent discussions with partner before intercourse may represent an inconsistency between belief and behavior. We suggest that responsibility for birth control be included in pregnancy prevention programs. We believe these data lend support for including the decision-making theme in such programs.

Family relationships and interpersonal relationships were measured by the adolescents' interpretation of the frequency of agreeable relationships with their parents, friends, and boyfriends (Table 9).

Table 9

PERCENTAGES OF PREGNANT, SEXUALLY ACTIVE, AND NONSEXUALLY ACTIVE WOMEN REPORTING RELATIONSHIPS IN WHICH THEY AGREE WITH VERY FEW ARGUMENTS

Person in Relationship	Pregnant Adolescents	Sexually Active Adolescents	Nonsexually Active Adolescents
Mother	29% (n=2)	0% (n=0)	50% (n=4)
Father	50% (n=3)	0% (n=0)	40% (n=2)
Best Friend	80% (n=4)	100% (n=6)	75% (n=6)
Boy Friend	67% (n=4)	67% (n=4)	50% (n=4)

The research team concludes that a majority of girls in all groups view their relationships with their best friends and boyfriends as being in agreement. This is not true in relationships with parents, particularly among sexually active adolescents whose prime source of disagreement with their fathers concerns their relationship with boys. No clear-cut sources of disagreement between girls and their boyfriends emerge, except for the nonsexually active girls who cited "other girls" as their predominant source of disagreement.

We further conclude that these data lend limited support to teaching family relationships in the classroom. Quality of family relationships seems to have some bearing on sexual activity.

Role development was addressed by the three groups of adolescents. The following percentages had two to four well thought-out career plans:

Pregnant adolescents	33% (n=2)
Sexually active adolescents	67% (n=4)
Nonsexually active adolescents	38% (n=3)

We suggest that the sexually active clinic attenders had the most well-developed sense of futurity, a possible influence in their decision to practice contraception as well as to plan careers. These findings lend tentative support for career exploration in pregnancy prevention programs. The low percentage of well thought-out career plans among the nonsexually active clinic attenders may have resulted from the fact that two 12-year-olds were included in the group.

To further evaluate role development, adolescents were asked to consider characteristics that are important for husbands and wives (Table 10) and mothers and fathers (Table 11).

Sexually active clinic attenders view the job of the husband/father as more important than that of the wife/mother, despite the fact that this group has more well thought-out career plans than the other two groups. The sexually active adolescents do not consider the ability to perform household tasks as important for the husband. In evaluating important characteristics for husbands and wives, a "good job" was rated as important by all three groups (pregnant girls taking the strongest stance in this regard).

An important characteristic for parents that is cited by all groups is the provision of food, clothing, and a home for children. Members of the three groups apparently feel that both parents should play with and discipline their children and provide instruction about religion and sex. The data do not reveal clear-cut differences in male and female roles in regard to child care. The onus of the responsibility of pregnancy among pregnant women may have changed previously held attitudes toward parenthood. All three groups appear to have somewhat egalitarian views of the roles of mother and father. We conclude that there is scant evidence for including role development in pregnancy prevention programs.

The content validity of the NAITPP is established through the literature review and supported through the interviews. Four themes receive the strongest support: Changing Bodies and Medical Concerns, Decision-making, Family Relationships, and Interpersonal Relationships.

Reliability

An estimate of the reliability for the instrument was obtained by the formula for Coefficient Alpha, a generalization of the Kuder-Richardson 20 formula (Nunnally, 1972). The estimate of reliability for the total group and each of the subgroups is presented in Table 12.

Table 10

VERY IMPORTANT CHARACTERISTICS FOR HUSBANDS AND WIVES AS VIEWED BY PREGNANT, SEXUALLY ACTIVE, AND NONSEXUALLY ACTIVE ADOLESCENTS

Important Characteristics	Pregnant Adolescents		Sexually Active Clinic Attenders		Nonsexually Active Clinic Attenders	
	Husband	Wife	Husband	Wife	Husband	Wife
Has a good job	100% (n=7)	43% (n=3)	67% (n=4)	0% (n=0)	100% (n=7)	63% (n=5)
Likes children	86% (n=6)	86% (n=6)	83% (n=5)	100% (n=6)	50% (n=4)	57% (n=4)
Is gentle and kind	57% (n=4)	57% (n=4)	33% (n=2)	100% (n=6)	75% (n=6)	86% (n=6)
Is good at household tasks	43% (n=3)	71% (n=5)	17% (n=1)	83% (n=5)	33% (n=2)	57% (n=4)
Is strong and assertive	71% (n=5)	43% (n=3)	50% (n=3)	33% (n=2)	50% (n=4)	29% (n=2)
Is good sex partner	29% (n=2)	43% (n=3)	17% (n=1)	17% (n=1)	13% (n=1)	14% (n=1)
Has attractive face and body	29% (n=2)	29% (n=2)	0% (n=0)	0% (n=0)	38% (n=3)	29% (n=2)

Table 11

VERY IMPORTANT CHARACTERISTICS FOR FATHERS AND MOTHERS AS VIEWED BY PREGNANT, SEXUALLY ACTIVE, AND NONSEXUALLY ACTIVE ADOLESCENTS

Important Characteristics	Pregnant Adolescents		Sexually Active Clinic Attenders		Nonsexually Active Clinic Attenders	
	Husband	Wife	Husband	Wife	Husband	Wife
Playing with children	86% (n=6)	71% (n=5)	67% (n=4)	67% (n=4)	57% (n=4)	50% (n=4)
Disciplining children	71% (n=5)	57% (n=4)	83% (n=5)	83% (n=5)	75% (n=6)	86% (n=6)
Taking care of food, clothing and house	100% (n=7)	86% (n=6)	50% (n=3)	50% (n=3)	88% (n=7)	100% (n=7)
Teaching children religion	67% (n=4)	67% (n=4)	33% (n=2)	50% (n=3)	43% (n=3)	50% (n=4)
Teaching children about sex	57% (n=4)	57% (n=4)	50% (n=3)	83% (n=5)	38% (n=3)	38% (n=3)

Table 12

RELIABILITY ESTIMATES BY GROUPS

Group	N	Coefficient Alpha Reliability Estimate
1	24	.951
2	35	.961
3	55	.984
Total	114	.977

As in the instrument development phase, the Alpha coefficients for the entire pool of respondents and the individual groups are remarkably high. Given the length of the test, this finding is taken as evidence that the instrument items measure the same thing and indicates high internal consistency among instrument items.

Pearson product moment correlations were computed between mean item scores and mean total test scores to determine whether any individual item had induced a pattern of response among subjects that would weaken test reliability. These data by item are presented in Table 13.

By testing the null hypothesis $r_{xy} = 0$ to determine the significance of the above correlations, it was found that items 3 and 5 to 84 are all significant at the .001 level, while items 1, 2, and 4 were all significant at the .01 level. Taken together, these data confirm two ideas: (1) items on the instrument measure the same factors or related ones with no items acting as negative discriminators, (2) the obtained correlations have a probability of appearing of less than .001, if in some larger hypothetical population there is no correlation between item and total score.

Thus, we conclude that no item appears to be sufficiently distracting with those sampled to warrant removal. The total instrument received sufficient support for reliability to warrant further research and use without major modification.

Determination of Approval Scores

Project objective 4 called for determination approval for each skill identified on the instrument (NAITPP). Mean approval scores ranged from a low score of 4.62 for item 6 ("Suggest ways of asking for a date") to a high of 6.78 for item 9 ("Weigh the consequences of premarital pregnancy").

Table 13

MEANS, STANDARD DEVIATIONS AND ITEM TOTAL CORRELATION FOR EACH ITEM ON NEEDS ASSESSMENT INVENTORY FOR TEENAGE PREGNANCY PREVENTION

	Mean	Standard Deviation	Item Total Correlation
1. State signs of pregnancy in the female.	6.43	1.09	.286
2. Explain how both partners can take responsibility for birth control.	6.50	1.22	.272
3. Describe ways in which the double standard operates in male-female relationships.	5.95	1.49	.569
4. Explain how each of the methods of birth control is used and how effective each is.	6.32	1.38	.303
5. List things most liked and disliked about taking care of babies and toddlers.	5.82	1.54	.571
6. Suggest ways of asking for a date	4.62	2.01	.582
7. Identify basic emotions of people.	6.14	1.14	.464
8. Identify qualities of people who succeed in an interesting job.	5.25	1.83	.451
9. Weigh the consequences of premarital pregnancy.	6.78	.74	.444
10. List things most liked and disliked about taking care of school-aged children.	5.52	1.68	.507

Table 13 (continued)

	Mean	Standard Deviation	Item Total Correlation
11. Explain the effects of failing to treat venereal diseases.	6.64	.91	.403
12. Use words and body language to express thoughts and feelings.	4.94	1.90	.456
13. Establish and use guidelines for communicating well with friends.	5.93	1.44	.521
14. Define the term "role."	5.49	1.55	.626
15. Compare mature and immature ways of achieving independence from parents.	6.27	1.07	.626
16. Discuss the responsibilities of being the parent of a teenager.	6.33	1.15	.539
17. State causes, symptoms, cures and ways of preventing each of the venereal diseases.	6.42	1.21	.382
18. Describe ways in which girls try to attract boys.	5.07	1.85	.597
19. Explain how the messages received from parents, clergy, and friends both encourage and discourage sexual activity.	5.83	1.49	.625
20. Suggest guidelines for working out disagreements with parents.	6.27	1.05	.628

Table 13 (continued)

	Mean	Standard Deviation	Item Total Correlation
21. Describe ways in which people can show their love for one another.	6.14	1.43	.635
22. Describe ways in which male and female bodies change during adolescence.	6.54	.90	.529
23. Identify decisions which are made by self and those made by parents.	5.88	1.27	.718
24. Describe ways in which roles of wife, mother and career person sometimes conflict with and complement one another.	5.91	1.25	.646
25. Describe characteristics of meaningful dating relationships.	5.89	1.34	.713
26. Compare male and female reproductive systems.	6.17	1.41	.517
27. State advantages of planning for sexual activity.	5.49	1.90	.395
28. Describe ways in which sexual feelings may be expressed.	5.54	1.63	.508
29. Practice ways of working out disagreements between friends.	5.82	1.35	.496
30. Share and discuss moral values with parents, clergy, teachers and friends.	6.30	1.21	.540

Table 13 (continued)

		Mean	Standard Deviation	Item Total Correlation
31.	Describe a medical examination required for obtaining methods of birth control.	5.83	1.70	.474
32.	Assess advantages and disadvantages of an interesting job.	5.32	1.73	.586
33.	Describe the following kinds of love: love of God, brotherly love, love between a man and a woman, and love between parents and child.	6.18	1.26	.699
34.	Explain why people sometimes feel guilty about their sexual feelings.	6.23	1.19	.674
35.	Compare roles of mothers and fathers and explain how these are acquired.	5.99	1.40	.705
36.	Discuss personal values that result in appropriate behavior in dating situations.	6.01	1.40	.773
37.	Explain the difference among three phases of the menstrual cycle indicating when conception is most likely to occur.	6.20	1.41	.522
38.	Suggest advantages and disadvantages of having children.	6.09	1.33	.643
39.	Describe ways in which communication between two people can be blocked.	6.06	1.17	.717

Table 13 (continued)

	Mean	Standard Deviation	Item Total Correlation
40. Explain how hormones affect growth and development during adolescence.	6.18	1.09	.567
41. Explain how the messages received from books, TV, and movies both encourage and discourage sexual activity.	5.97	1.44	.795
42. Suggest ways in which sexual responsibility can be handled.	6.25	1.38	.591
43. Explain why couples may fail to use birth control.	6.04	1.60	.612
44. Explain how decisions are made in dating relationships.	5.84	1.40	.827
45. List reasons why young people fail to plan for sexual intercourse.	5.83	1.80	.598
46. Explain the importance of a medical examination in obtaining some methods of birth control.	6.13	1.54	.528
47. State functions of each of the major parts of the female reproductive system.	6.23	1.31	.618
48. Suggest advantages and disadvantages of getting married.	6.03	1.38	.717
49. Illustrate appropriate ways of declining a date.	5.31	1.76	.700
50. Describe characteristics of meaningful friendships among members of the same sex and the opposite sex.	6.06	1.23	.694

Table 13 (continued)

	Mean	Standard Deviation	Item Total Correlation
51. Explain the differences between personal goals and family goals.	5.69	1.38	.724
52. Describe the characteristics of meaningful marriage relationships.	6.15	1.28	.678
53. Explain how emotions can affect actions.	6.39	1.03	.745
54. Discuss the meaning of kissing, petting, and intercourse for boys and girls.	5.98	1.46	.639
55. Practice ways of working out disagreements with parents.	6.02	1.21	.687
56. Identify and discuss sources of disagreements between young people and their parents.	5.99	1.27	.689
57. Recognize male and female similarities in stages of sexual excitement.	5.67	1.72	.530
58. Suggest qualities which are important for parents to have.	5.85	1.47	.634
59. Classify those contraceptives which are used by the female and those which are used by the male.	5.89	1.67	.492
60. Investigate an interesting job.	5.12	1.82	.529

Table 13 (continued)

	Mean	Standard Deviation	Item Total Correlation
61. Explain the advantages and disadvantages of each method of birth control.	6.09	1.58	.449
62. Suggest ways in which people are accepted into groups.	5.43	1.44	.633
63. Identify personal goals related to marriage and family.	6.04	1.31	.741
64. Explain the difference between love and affection.	6.34	1.16	.759
65. State the methods of birth control that require a doctor's prescription.	5.90	1.68	.470
66. Compare the concept of responsibility with that of romantic notion.	6.15	1.21	.522
67. Cite the consequences of having premarital sexual intercourse.	6.55	1.12	.557
68. Discuss concerns that adolescents have about their changing bodies.	6.34	1.25	.619
69. Describe ways in which the roles of husband, father, and career person sometimes conflict with and complement one another.	5.93	1.25	.731
70. Explain reasons why people fail to have venereal diseases treated by a doctor.	6.28	1.24	.563

Table 13 (continued)

	Mean	Standard Deviation	Item Total Correlation
71. Explain reasons why some teenagers become pregnant.	6.54	1.22	.696
72. Summarize the responsibilities of being the parent of an infant or toddler.	6.44	1.00	.607
73. Explain ways in which sexual feelings fit into lifestyles.	6.03	1.35	.711
74. Explain how emotions affect the decision to use birth control.	6.03	1.44	.712
75. Practice ways of dealing with anger.	5.82	1.42	.631
76. Suggest advantages and disadvantages of being single.	5.57	1.53	.570
77. Discuss ways in which boys try to attract girls.	5.29	1.82	.634
78. Correctly identify the steps of decision-making.	6.09	1.35	.635
79. Define the following terms: values, goals, decision-making.	6.15	1.30	.628
80. Explain how cooperation among family members helps each individual to achieve personal goals.	5.96	1.30	.622
81. Identify personality characteristics that are important in friends, dates, and marriage partners.	5.90	1.38	.678

Table 13 (continued)

	Mean	Standard Deviation	Item Total Correlation
82. Identify places where safe and effective contraceptives can be obtained.	5.75	1.88	.410
83. Identify the areas in a teenager's life for which he/she is responsible.	6.36	1.19	.638
84. Compare roles of husbands and wives and explain how these are required.	5.76	1.57	.611

From the individual item means, several patterns may be observed. Mean scores of items 6, 8, 12, 14, 18, 27, 32, 49, 60, 62, and 77 fall below 5.5 on the approval scale. These items fall into distinct groups. The following items relate to dating and girl-boy attraction to one another:

12. Use words and body language to express thoughts and feelings.

6. Suggest ways of asking for a date.

49. Illustrate appropriate ways of declining a date.

18. Describe ways in which girls try to attract boys.

77. Discuss ways in which boys try to attract girls.

62. Suggest ways in which people are accepted into groups.

The researchers hypothesize that inclusion of these items on the instrument was misinterpreted by some survey respondents. Number 12 may have been viewed as an objective related to training in how to communicate, using body language (as opposed to nonverbal communication) and words, rather than in how to express the importance and impact of feelings and emotions consciously and unconsciously transmitted both verbally and nonverbally. Revision of this item is as follows: "Explain the use of verbal and nonverbal language to express thoughts and feelings."* Similarly, items 6 and 49 may have been misinterpreted as instruction in specific dating behaviors, rather than instruction in the importance of the quality of communication patterns between members of the opposite sex. With respect to items 18 and 77, the investigators hypothesize that items 18 and 77 were interpreted as implying specific instruction in how to attract a member of the opposite sex. The investigators further hypothesize that most respondents rated item 62 low because they failed to see its relationship to the purpose of the instrument.

Items 8, 14, and 32 relate to career exploration and role:

8. Identify qualities of people who succeed in an interesting job.

14. Define the term "role."

32. Assess advantages and disadvantages of an interesting job.

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*Test revision includes item 47 which reads as follows: State functions of each of the major parts of male and female reproductive systems.

We hypothesize that respondents failed to see the relationship between career exploration and role to pregnancy prevention. We believe there is sufficient evidence in the literature review to include these items in pregnancy prevention programs.

Item 27 relates to premeditated sex:

27. State advantages of planning for sexual activity.

The mean approval score for this item is 5.49, indicating that it is just below the moderate approval range.

Determination of Approval Scores by Subtests and Groups

Project objective 5 called for reaction to themes included in the inventory. Mean approval scores for each subtest identified on the instrument (NAITPP) were calculated. Sampling procedures described earlier were used to survey three groups (Figure 4).

Group	N	Characteristics
1	24	Eighteen students and six parents who were members of an advisory committee to the superintendent of schools, Orange County, Florida.
2	35	Community professionals working on problems of teenage pregnancy in Pensacola, Florida.
3	55	Florida citizens selected randomly from telephone directors in the nine largest cities of the state.

Figure 4. Characteristics of Survey Groups

Mean scores for each of the above groups were generated, using each of the items for the subtests:

Changing Bodies and Medical Concerns (Items 1, 4, 11, 17, 22, 26, 28, 31, 37, 40, 46, 47, 57, 59, 61, 65, 68, 70, 82)

Values Clarification (Items 3, 5, 10, 30, 34, 36, 54, 58, 71, 73, 81)

Decision-making (Items 2, 9, 23, 27, 38, 42, 43, 45, 48, 51, 60, 63, 66, 67, 76, 78, 79, 83)

Family Relationships (Items 15, 16, 20, 55, 56, 72, 80)

Interpersonal Relationships (Items 7, 12, 13, 21, 25, 29, 33, 39, 44, 50, 52, 53, 62, 74, 75)

Role Development (Items 6, 8, 14, 18, 19, 24, 32, 35, 41, 49, 64, 69, 77, 84)

Our research team determined differences in mean subtest scores, using analysis of variance with Duncan's multiple range post-hoc analysis to locate sources of significant differences. Specific findings are given in Tables 14 through 25 to follow.

The range of the mean subtest scores was 5.06 for the school advisory group in approving Role Development to 6.36 for the Florida citizens group in approving Family Relationships. In every instance the mean approval scores of the school advisory group were lower than the comparable scores for the professionals and the Florida citizens.

Based on the real limits of the number 6 (5.5 to 6.5), there was moderate approval for all but two themes proposed for educational programs for adolescents between 13 and 15 years of age. Based on the real limits of the number 5 (4.5 to 5.5), there was only slight approval by the school advisory group for including Interpersonal Relationships and Role Development in pregnancy prevention programs. The items related to dating, boy-girl attraction, and investigations of careers fell primarily into those categories and may have been viewed as irrelevant to the problem of pregnancy prevention for this age group. The other four subtests (Changing Bodies and Medical Concerns, Values Clarification, Decision-making, and Family Relationships) met with moderate approval, based on the real limits of the number 6 (5,5 to 6.5).

In every instance, approval of the subtest was lowest for the school advisory group. Professionals rated Decision-making and Interpersonal Relationships significantly ($p < .05$) higher than the school advisory group. Florida citizens rated Family Relationships and Role Development significantly ($p < .05$) higher than the school advisory group. There are only 5 chances in 100 of obtaining these results by chance. Hence, we infer the differences are real. Strong indications of difference were found for Changing Bodies and Medical Concerns ($p < .07$) and Values Clarification ($p < .12$).

Our research team believes these data may be indicative of several viewpoints. Various groups may generally support pregnancy prevention programs when the skills are specified so that they can be examined and judged. Second, the people directly involved (in this case, parents and students) are more reticent to approve the program. Third, adults and professionals may have a broader view of the problem of adolescent pregnancy than do parents and young people who typically are reluctant to discuss sexual activity together.

Table 14

ANALYSIS OF VARIANCE ON SUBTEST AMONG ALL GROUPS:
CHANGING BODIES AND MEDICAL CONCERNS

	DF	Sum of Squares	Mean Square	F Value	p of F
Within	2	5.48	2.74	2.71	.07
Between	106	107.15	1.01		
Total	108	112.63			

Table 15

MEAN SCORES ON SUBTEST: CHANGING
BODIES AND MEDICAL CONCERNS

Mean	Grouping	N	Group
6.25	A	52	Florida Citizens
6.25	A	33	Professionals
5.71	A	24	School Advisory Group

Table 16

ANALYSIS OF VARIANCE ON SUBTEST AMONG ALL GROUPS:
VALUES CLARIFICATION

	DF	Sum of Squares	Mean Square	F Value	p of F
Within	2	3.79	1.90	2.19	.12
Between	108	93.51	.87		
Total	110	97.30			

Table 17

MEAN SCORES ON SUBTEST:
VALUES CLARIFICATION

Mean	Grouping	N	Group
6.28	A	35	Professionals
6.04	A	50	Florida Citizens
5.66	A	21	School Advisory Group

Table 18

ANALYSIS OF VARIANCE ON SUBTEST AMONG ALL GROUPS:
DECISION-MAKING

	DF	Sum of Squares	Mean Square	F Value	p of F
Within	2	4.92	2.46	3.47	.03
Between	103	72.94	.71		
Total	105	77.86			

Table 19

MEAN SCORES ON SUBTEST:
DECISION-MAKING

Mean	Grouping	N	Group
6.17	A	35	Professionals
6.08	A B	53	Florida Citizens
5.67	B	23	School Advisory Group

Table 20

ANALYSIS OF VARIANCE ON SUBTEST AMONG ALL GROUPS:
FAMILY RELATIONSHIPS

	DF	Sum of Squares	Mean Square	F Value	p of F
Within	2	5.53	2.76	3.33	.04
Between	109	90.42	.83		
Total	111	95.94			

Table 21

MEAN SCORES ON SUBTEST:
FAMILY RELATIONSHIPS

Mean	Grouping	N	Group
6.36	A	55	Florida Citizens
6.24	A B	34	Professionals
5.77	B	23	School Advisory Group

Table 22

ANALYSIS OF VARIANCE ON SUBTEST AMONG ALL GROUPS:
INTERPERSONAL RELATIONSHIPS

	DF	Sum of Squares	Mean Square	F Value	p of F
Within	2	7.11	3.55	4.31	.02
Between	109	89.85	.82		
Total	111	96.96			

Table 23

MEAN SCORES ON SUBTEST:
INTERPERSONAL RELATIONSHIPS

Mean	Grouping	N	Group
6.10	A	35	Professionals
6.00	A B	54	Florida Citizens
5.43	B	23	School Advisory Group

Table 24

ANALYSIS OF VARIANCE ON SUBTEST AMONG ALL GROUPS:
ROLE DEVELOPMENT

	DF	Sum of Squares	Mean Square	F Value	p of F
Within	2	7.44	3.72	2.89	.06
Between	104	133.70	1.28		
Total	106	141.13			

Table 25

MEAN SCORES ON SUBTEST:
ROLE DEVELOPMENT

Mean	Grouping	N	Group
5.71	A	51	Florida Citizens
5.66	A B	32	Professionals
5.06	B	24	School Advisory Group

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This project laid the groundwork for an interdisciplinary effort designed to prevent pregnancy among young adolescents. Toward this goal the following project objectives were fulfilled:

1. Identification of factors associated with adolescent sexual behavior, contraceptive behavior, and pregnancy through a search of the literature.

2. Development of instructional objectives or skills associated with pregnancy prevention based on literature review.

3. Development and validation of a survey instrument, entitled Needs Assessment Inventory for Teenage Pregnancy Prevention, which measures approval of instructional objectives or skills for inclusion in an educational program for adolescents aged 13 to 15.

4. Determination of reaction to basic themes included in the inventory (Changing Bodies and Medical Concerns, Values Clarification, Decision-making, Family Relationships, Interpersonal Relationships, and Role Development) among surveyed sample groups.

The literature review provides a strong interdisciplinary basis for development of the Needs Assessment Inventory for Teenage Pregnancy Prevention. It also provides a background for teachers, group leaders, and other professionals working with the problem of adolescent pregnancy.

We conclude that the Needs Assessment Inventory for Teenage Pregnancy Prevention has sufficient support for its content validity and reliability to warrant use without modification. Content validity was assessed in two ways: (1) literature search, and (2) interviews with three groups of pregnant, sexually active, and nonsexually active adolescent women (N = 21). A rationale for each item was provided by the literature search (Appendix B). The interviews with adolescent women yielded support for the following themes: Changing Bodies and Medical Concerns, Decision-making, Family Relationships, and Interpersonal Relationships. Reliability (Coefficient Alpha) scores were obtained through surveys of three groups: superintendent's advisory group, professionals working on problems of teenage pregnancy, and Florida citizens selected randomly from nine of the largest cities (N = 114). Scores ranged from .951 to .984 with a total estimate of .977.

Reaction to the themes was measured by calculating mean subtest scores for items included in each. The scores ranged from 5.06 for approval of Role Development by the school advisory group to 6.36 for approval of Family Relationships by Florida citizens. Based on the real limits of the number 6 (5.5 to 6.5) there was moderate approval for all but two themes proposed for inclusion in educational programs for adolescents between 13 and 15 years of age. Based on the real limits of the number 5 (4.5 to 5.5) there was only slight approval by the school advisory group for including Interpersonal Relationships and Role Development in pregnancy prevention programs. Moderately high approval scores on a majority of the items establish the practicality and acceptability of the instrument for use in needs assessment.

Instrument Use

The Needs Assessment Inventory for Teenage Pregnancy Prevention will be useful for systematic needs assessment. Specifically, data generated from this instrument could be used in any one of several ways:

1. To assess parental or community approval of educational objectives associated with pregnancy prevention for use in public schools or private agencies.

   - By establishing a cut-off point (possibly 5.5, the real lower limit of the number 6, indicating moderate approval) a planning group may use data as a basis for a decision to include or delete objectives. Further, a matrix of objectives based on rank ordering of mean scores could be developed in one of three ways: (1) based on all mean scores for each of the items on the instrument; (2) based on mean scores for each cluster of items constituting a theme; (3) based on mean scores for each item within each theme.

2. To assess degrees of approval of objectives by responding groups identified by region, professional affiliation, socioeconomic status, religious affiliation, age, or sex.

   - The inventory could be used to predict levels of approval or support by groups selected by stratified sampling procedures (Wiersma, 1975). Thus, it could be used to predict levels of approval or support by groups for pregnancy prevention programs.

3. To develop local or state pre-service and in-service education programs.

   - If the instrument is accepted as suitably identifying the range of objectives associated with a broad-based pregnancy prevention program, then by inference it becomes a device for identifying both content and process which must be mastered by teachers and group leaders who work with the objectives.

4. To develop curricula related to pregnancy prevention for young adolescents.

   - Specifically, if the instrument is accepted as identifying the range of objectives for pregnancy prevention programs, it may be used as a tool for curriculum development when questions of content identification as well as scope and sequence are raised and resolved. Additionally, the objectives become criteria upon which to build curricula and evaluate curricula.

Further Instrument Development

Further validation of the instrument may include sampling of groups mentioned in 1 and 2 above. Additional data generated from groups of adolescents (including pregnant women) would provide more information about the applicability of the instrument.

After large numbers of individuals are sampled using the Needs Assessment Inventory for Teenage Pregnancy Prevention, a factor analysis (Helmstadter, 1964) may be used to determine the extent to which the instrument measures various content areas or themes. Factor analysis may determine: (1) the number of factors (themes) which are statistically observable on the test, and (2) the extent to which each factor (theme) is measured by each subtest.

With further instrument development, reliability should be rechecked using the Coefficient Alpha formula for internal consistency.

Discussion

While our research team staff is convinced that all project objectives were satisfied, we believe that additional reflection may be warranted in two areas. An open question which goes beyond the scope of the present study is the relative importance of any given factor and its objectives associated with the problem of adolescent pregnancy. Further, research may determine which of these is most significant in preventing pregnancy among adolescents.

A second area of reflection is the use of themes based on Robert Havighurst's developmental tasks. We are satisfied that Havighurst's model provides a suitable organizing framework for the instrument. The high reliability and item-total correlations support this conclusion. What is uncertain, however, is the relative importance of thematic clusters of items to pregnancy prevention programs. Clearly, all pilot test groups have lower approval for items assigned to Interpersonal Relationships and Role Development than for those assigned to the other four themes. While such a discrepancy was minimal, with no mean falling below 5.06, it does highlight the difference in problem definition between sampled groups and our

research team. Whether the source of such discrepancy may be attributed to problem definition alone or is an artifact of organizing items to conform to themes associated with the Havighurst model must be left to future investigations.

APPENDIX A

REVIEW OF THE LITERATURE

REVIEW OF THE LITERATURE

The current movement toward development of programs aimed at pregnancy prevention among young adolescents requires examination of the following areas of related literature:

1. Cultural context of adolescent development as well as functions of families and schools.

2. Problems inherent in the development of an intervention program aimed at pregnancy prevention.

3. Frequency of behaviors and indication of interest in factors associated with sexual development during childhood.

4. Parental and public attitudes toward family life education dealing with sex-related concepts.

5. Adolescent sexual behavior, contraceptive behavior, and pregnancy.

6. Psychosocial therapy related to adolescent behavior and development.

This review of literature examines those factors cited above for the purpose of developing a rationale for objectives of the Needs Assessment Inventory for Teenage Pregnancy Prevention.

Cultural Context of Adolescent Development, Families, and Schools

The educator seriously interested in school programming for the eighties cannot ignore several characteristics of our society and culture. These include a network of premises that are important for the curriculum planner in the development of programs for family life education.

1. Our society is changing more rapidly than at any other time in history. Traditional values, beliefs and norms are under assault as a function of the acceleration of trends, the proliferation of knowledge, the influence of mass communication, the rise of gross national product, the decline in the influence of the extended family, and the diminution of natural resources.

2. Children, particulary emerging adolescents, are maturing biologically and psychosocially at more accelerated paces than in any previous period in history.

3. The influence of families and group identification with the same sex, race or religion are declining in their educative influence and importance to adolescents, while the peer group and the peer culture are becoming more important.

4. As a technologically oriented society has become more complex, schools are assuming increased responsibility for educating the young, while family influence has declined.

5. Schools are coming under increased attack, as segments of society interested in the education of the young have become critical of the behavior patterns of children and adolescents.

6. Schools are assuming so much responsibility for educational processes that they have become natural scapegoats for social ills that affect the young.

The most outspoken futurists have been Toffler (1970), Shane (1968), Spindler (1965), Keniston (1968), Rosazk (1969), Reich (1970), and Spock (1974). Toffler discusses society as a whole, and describes change in our world as a "roaring" current--"a current so powerful today that it overturns institutions, shifts our values and shrivels our roots." He views change in two dimensions--direction and rate. Both dimensions are seen as critical in determining the future character of society, as well as the future quality of life. With world resources diminishing, population increasing, people moving, families and marriages disintegrating, rivalries for personal, sexual, and national space proliferating, and tribalism in all its forms--racism, ethnocentrism, sexism, and nationalism--increasing, the management of change and the human responses to it have become critically important.

The above litany of changes confronts every individual in society, but it is especially important for emerging adolescents. Adolescence as a period of growth is characteristically a time of confusion. While trying to fulfill what Erikson (1968) described as a search for identity, the youth is bombarded by biological, social and emotional pressures. As a result, some observers see adolescence as a negative period characterized by "stress and storm" (Hall, 1905), and as a period marked by rebellion, rootlessness, emotional trauma, sexual promiscuity, and disengagement from traditional values (Conger, 1971).

Others view the same period in a more positive light as merely a time for "coming of age" and finding one's place in life. Whatever the interpretation, most observers have agreed that adolescence is a critical developmental period in terms of identity formation and the related aspects of sexual awakening. It seems obvious that such growth processes become threatened as the degree of broad societal upheaval changes an adolescent's ways of living.

In searching for social and psychological anchor points for decision-making, today's adolescents are vulnerable when any basic educational institution fails to provide stability (Reich, 1970; Gadpaille, 1975; Money and Tucker, 1975).

In discussing changes in American culture, Spindler (1965) noted a shift in our cultural values from what he called traditional values to emergent values. Traditional values include identification with standards of Puritan morality, the work-success ethic, sanctity of individualism, achievement orientation, and a future time orientation. Emergent values include sociability, relativistic moral attitudes, consideration for others, hedonistic present-time orientation, and conformity to group (Spindler, 1965).

While Spindler was making broad societal observations, society experienced some conservative retrenchment within the last 14 years. His construct of conflicting values may be of greatest use in differentiating the values orientation shared between parents (traditional) and the young (emerging). If such an analysis proves accurate, it holds importance in explaining the differences in needs and perceptions of parents and their young concerning their expectations for family life education programs. Each value orientation favors different school programming.

The second premise holds that children, particularly emerging adolescents, are maturing biologically and psychosocially at a more accelerated pace than in previous generations. That children of both sexes are both heavier and taller than those in previous generations is well-documented (Metropolitan Life, 1973, p. 8-9; Zubin and Money, 1973; Sorensen, 1973; Hunt, 1974; Conger, 1977). This growth pattern, while cross-cultural, seems reserved to the technologically more advanced nations where "improvements in nutritional status and other environmental factors have resulted in more children coming closer to the limits of physical development" (Kastenbaum, 1979, p. 381).

More important, however, with respect to family life education program planning, is a progressively earlier emergence of menarche and sexual drives in children. Phillips (1969) reported that mean age of menarche has dropped two years, from 13.5 to 11.5, since 1950. Although predicted sexual ripening has occurred somewhat later in boys, peaking in their growth spurts at 14 as compared to 12 years for girls (Tanner, 1971), the appearance of secondary sex characteristics during this period cannot be ignored. Causes for this earlier maturation have been widely debated, and its implications are important to family life education. Chamberlain and Girona (1976) expressed this succinctly:

> Today we find the age of adolescence beginning early, remaining overly long, and ending much later than for previous generations. With the onset of puberty at an earlier age, our children find themselves wandering through a no-man's land between childhood and adulthood for at least ten years (p. 302).

Further, children are biologically maturing earlier, but must wait even longer than previous generations for sexual freedom, social rights, and adult obligations (Bettleheim, 1969; Conger, 1971; Money and Tucker, 1975). When adults have been unsuccessful in helping youth to cope with this dilemma, the results are well-documented--almost one of every two adolescent females has experienced intercourse by age 19 and six in ten of those report using no means of contraception (Zelnik and Kantner, 1977).

From the point of view of several researchers and educators (Libby, 1971; Gordon, 1974; Kirkendall, 1976), the implications of this paradox seem clear; education in some form is necessary. Their findings illustrate beyond doubt that learning appears to play a critical role in determining the sexual response patterns that are adopted to satisfy sexual drives (Mussen, Conger, and Kagan, 1979). What is still open to considerable debate are the sources and nature of such education.

A third premise asserts that the influence of families and group identification with members of the same sex, race, or religious groups have declined in influence and importance as educational agents in socialization, as the peer group and the peer culture have taken on greater significance for adolescents. The demise of the nuclear family and the ascendency of the youth culture have been familiar targets for social commentators in recent years. Societal patterns that emerged with increased specialization, heightened technology, urbanization, and mobility have marked the advent of declining family influence.

Differences between the era in which today's parents grew up and that of their children have led to marked differences in the cultural values and educational experiences of the two generations at similar points in their development (Keniston, 1960; Bengston, 1970). Simply stated, parents and children have formulated remarkably different experience bases for developing values and making decisions.

A related issue is the lessening influence of family authority. Today's youth have had, with the aid of mass media, a rare opportunity to study adult (parent) problem-solving behavior. They have witnessed a deeply divided adult society that experiences infrequent success in solving complex problems. Conger describes the effects of this experience:

> From childhood on, they (adolescents) have been exposed to deep divisions among prestigious adults on almost every front, from the broadest social issues to the most intimate questions of personal standards and mortality. Even to the limited extent that adolescents have been able to view adult society as speaking with one voice and planning a unified attack on our mounting problems, the evidence of its capacity to achieve success has not been overly reassuring. Consequently, the authority of the adult culture has been compromised in the eyes of many adolescents, and with it, the authority derived by parents from their positions as family representatives of this culture. (1977, p. 202)

Thus, in Conger's view, adolescents have been disillusioned by adult modeling and compelled to look to their own peer group for anchorage and direction. Ironically, the ascendency of the peer culture has been at least partly stimulated by adult-parent action. By informally creating a situation of adolescent apartheid in which the adolescent is denied ready entry into adult life, adults have unwittingly fed the adolescent's natural inclination to look to the peer group for guidance, support, and communication (Conger, 1977; Mussen, Conger and Kagan, 1979).

The implications of peer group substitution for family life education are enormous. The works of Libby (1969, 1970, 1971, 1974a, and 1974b) and Sorensen (1973) cite several important indicators of peer group influence. Libby (1974b) found that parents wanted to talk about sex with their children, but simply didn't know how. Sorensen (1973) found similar attitudes among teenagers who reported that they wanted to talk about sexual matters with their parents but felt uncomfortable. Looking further to the sources of adolescent sex education information, Libby found that the peer group was of primary importance for males and of secondary importance in adolescent females.

The role of the schools has changed as post-industrial societies have become increasingly complex and as more women have entered the work force. Families have expended less time in the education of their young. In hindsight, it is perhaps surprising that this event has passed with some enthusiasm from both parents and teachers. Teachers welcomed more responsibility in education, not only because it guaranteed more jobs, but usually meant that formal education would begin at earlier ages and be managed by professionals. Teachers, somewhat naively believed if they could get the child earlier and keep him longer, they could overcome the deleterious effects of certain family situations.

Schools, no matter how humane, well-intentioned and well-organized they may be, are nevertheless institutions designed to treat groups of people. For those youngsters whose parents surrendered some educative functions to the school but retained others and kept open communication lines with their children, the problems have probably been few. For many others who surrendered care and nurturance of their children to others, legally the school but de facto the peer groups, the success of this plan has been less than pleasing. The litany of adolescent problems is familiar and easily found in any child or adolescent development book (Conger, 1977; Mussen et al., 1979). These problems have been identified as rising school dropout rates, rising indices of premarital pregnancy, drug abuse, alcoholism and suicide. To attribute these problems simply to the failure of the schools to motivate and educate the young, or of families to educate, nurture and support their children, is to look for routine answers to complex problems. What is clear is that both parents and schools (Gordon, 1976) must share the educative responsibility for the young and that many of the above problems are related to adolescents' response to a social station others have created for them.

A number of researchers (Keniston, 1968; Bettleheim, 1969; and Marin, 1971) argue convincingly that the prolonged isolation and education to which we subject our young stimulates rejection. Bettleheim contends that such involvement in these problems reflects their fear that society has no use for their present existence. Adolescents reject the system because they feel "they have been classified as 'waste materials' by the system" (1969, p. 31).

A related point was raised by the White House Committee on Children concerning the neglect of our young and their consequent peer orientation: to relegate the young to a world of their own is to deprive them of their humanity.

Problems Associated with Development of an Intervention Program Related to Adolescent Pregnancy

There have been several approaches to analyzing the problem of adolescent pregnancy (Johnson, 1974; Plionis, 1975). Predominant among these views have been those of psychology, medicine, and sociology. Psychological views have been divergent. On the one hand, adolescent pregnancy is viewed as a socially unsanctioned result of fulfillment of normal urges. On the other hand, the phenomenon of adolescent pregnancy has been viewed as the result of emotional problems or pathological behaviors. These views have been shared somewhat by the field of medicine where health care professionals have been required to accommodate to the unique health risks of pregnant teenagers and their offspring in providing primary health care for these groups. Sociological views have presented adolescent pregnancy as a function of socioeconomic status as well as professional, religious, and political affiliation with patterns of role transition that differ from socially prescribed norms being considered deviant.

Parents and professionals directly involved with pregnant adolescents are attempting to solve a problem whose parameters have not been clearly defined in any field (Johnson, 1974; Plionis, 1975). Consequently, in an attempt to identify factors associated with prevention of adolescent pregnancy, several critical characteristics associated with the state of the art must be acknowledged:

1. Lack of an empirically validated theoretical base associated with birth planning and pregnancy prevention in general as well as an adolescent pregnancy (Baizerman, Sheehan, Ellison, and Schlesinger, 1974; Plinois, 1975).

2. A failure to discriminate among adolescent sexual behavior, adolescent contraceptive behavior, and adolescent pregnancy (Johnson, 1974).

3. Lack of data related to adolescents' sexual behavior that is based on random samples and/or longitudinal samples (Baizerman et al., 1974; Chilman, 1978).

4. Preponderance of data related to sexual behavior based on college student samples due to the sensitivity and difficulty of drawing a sample of children or adolescents for doing sex-related research at pre-college levels (Chilman, 1978).

5. Greater willingness of professional and lay people to deal with concepts of adolescent sexuality once the problem has reached a crisis situation, i.e. pregnancy itself, than to deal with adolescent sexuality in the course of normal development (Johnson, 1974).

6. A tendency on the part of researchers to seek a single and underlying explanation for unwanted pregnancy (Osofsky, 1970; Baizerman et al., 1974; Plionis, 1975).

7. When theoretical formulations are utilized in relationship to adolescent sexual behavior, a tendency to use psychological theory in studies involving white females and sociological theory in studies involving black and other nonwhite females (Johnson, 1974).

8. A preponderance of studies related to adolescent contraceptive behavior and adolescent pregnancy using only female subjects (Johnson, 1974; Vaides and Hale, 1977; Chilman, 1978).

Given the immediacy of the problem of pregnancy prevention among adolescents, professionals in several fields are required to formulate decisions and make value judgments using inadequate data based upon a poorly conceived theoretical construct.

Sexual Behavior and Sexual Learning

Sexual response in human beings is a naturally occurring physiological response that begins shortly after birth and continues throughout the life span of the organism. The response cycle varies in intensity and duration with normal developmental changes in physiological characteristics. In addition to being under the influence of normal changes occurring with growth and development, the sexual response cycle is highly influenced by the emotional effects of guilt, anxiety and fear which may be inflicted at any age (Masters and Johnson, 1966, 1969; Kaplan, 1974).

The most extensive research ever done on childhood sexuality was that of the late Dr. Alfred Kinsey and his co-workers who interviewed pre-pubescent youth prior to 1955. Using the Kinsey data, Elias and Gebhard (1969) presented findings of these interviews.

The sample consisted of 432 pre-pubescent white boys and girls aged four to fourteen. The 305 boys and 127 girls in the sample were identified by social class and age.

Sex play, defined "as heterosexual and homosexual activities involving more than one person which occurred before the onset of puberty," was found frequently among both the pre-pubescent boys and girls:

1. Homosexual play occurred among 52% of the boys.

2. Heterosexual play occurred among 34% of the boys.

3. Homosexual play occurred among 35% of the girls.

4. Heterosexual play occurred among 35% of the girls. (Elias and Gebhard, 1969, p. 402)

Masturbation or self-stimulation was reported to be more frequent among boys than girls (56%, boys; 30%, girls). Masturbation among boys began between six and eight years of age while masturbation among girls began earlier, between five and seven years of age.

Interesting patterns of sexual knowledge emerged by sex and social class:

1. By age 13-14 virtually all (96%) blue-collar boys understood the concept of intercourse but only 4% understood the concept of fertilization. (In 1972 Arnold found that virtually all boys from the inner city understood how to use condoms before they understood the concept of fertilization.) Merely 27% of the 13-14 year old boys in the white collar group understood the concept of fertilization.

2. More blue-collar boys knew of intercourse than of pregnancy whereas more white collar boys knew of pregnancy than intercourse. This was due to the education of the white collar mothers in dealing with their children.

3. Pre-pubescent girls were not likely to discuss sex or to tell jokes related to sex.

4. The lower class girls had less sexual information than upper class counterparts. Lower class girls were less likely than upper class girls to have information on masturbation and were less likely to understand the concept of fertilization.

5. The upper class girls were more likely to have read books and magazines related to sexual behavior.

In 1970 Gebhard estimated that all of these behaviors occurred at earlier ages than they had in Kinsey's time.

Broderick (1966) later reaffirmed that children are capable of sexual arousal and orgasm at early ages. According to his theory, foundations for heterosexual attachments laid in early childhood are dependent on three primary conditions:

1. The parent or parent-surrogate of the same sex must not be so punishing or so weak as to make it impossible for the child to identify with him or her.

2. The parent or parent-surrogate of the opposite sex must not be so seductive or so punishing as to make it impossible for the child to trust members of the opposite sex.

3. The parents or parent-surrogates must not systematically reject the child's sexuality and attempt to teach him/her cross-sex role behavior.

With respect to middle childhood Broderick discussed a period of transition leading to adult heterosexual relationships. The steps of middle childhood sexual socialization were the following:

1. Attachment to a member of the opposite sex, i.e. having a boyfriend or a girlfriend.

2. Confessing to having been in love.

3. Preference for a cross-sex companion rather than a same-sex companion when going to a movie.

4. Going out on a date.

Although each step was not an absolute prerequisite for the succeeding step, there was generally an orderly progression of those activities.

Levels of sexual experience during childhood and adolescence generally moved from less intimate behaviors of holding hands, being held, kissing and necking, to more intimate behaviors of petting and coitus with one or more partners. Frequency of these activities by age and time was established recently by Vener and Stewart (1974) and are reported in Tables 26 and 27.

These data generated by Vener and Stewart (1974) measuring cross-sectional samples of youth in three Michigan communities over a three year time span, are summarized as follows:

1. There were increases in most sexual activities in all age groups between 1970 and 1973.

2. Sexual activities increased proportionately with increases in ages of boys and girls.

Table 26

HETEROSEXUAL ACTIVITY FOR BOYS IN COMMUNITY "B" BY AGE: 1970-1973* (IN PERCENTAGES)

Levels of Sexual Activity	13 and Younger		14		15		16		17 and Older	
	1970 (192)	1973 (180)	1970 (208)	1973 (220)	1970 (193)	1973 (191)	1970 (217)	1973 (176)	1970 (179)	1973 (173)
I. Held Hands	79	80	83	87	92	93	90	90	93	92
II. Held Arm Around or Been Held	60	67	79	78	83	87	90	87	90	90
III. Kissed or Been Kissed	63	65	72	78	76	84	86	85	86	87
IV. Necked (Prolonged Hugging and Kissing)	46	48	54	56	64	70	76	69	77	78
V. Light Petting (Feeling Above the Waist)	37	40	49	55	59	66	70	65	71	71
VI. Heavy Petting (Feeling Below the Waist)	32	34	36	42	44	56	53	55	62	62
VII. Gone All the Way (Coitus)	24	28	21	32	26	38	31	38	38	34
VIII. Coitus With Two or More Partners	14	17	14	15	11	21	16	23	17	23

*Have participated at least once in sexual activity.

Vener, A. M., and Stewart, C. S. America revisited: 1970-1973. Journal of Marriage and the Family, 1974, 36, 4, 728-735.

Table 27

HETEROSEXUAL ACTIVITY FOR GIRLS IN COMMUNITY "B" BY AGE: 1970-1973* (IN PERCENTAGES)

Levels of Sexual Activity	13 and Younger		14		15		16		17 and Older	
	1970 (191)	1973 (222)	1970 (197)	1973 (218)	1970 (195)	1973 (220)	1970 (200)	1973 (190)	1970 (142)	1973 (185)
I. Held Hands	78	84	91	87	92	89	95	91	95	97
II. Held Arm Around or Been Held	68	72	85	81	88	87	94	90	92	96
III. Kissed or Been Kissed	66	68	80	75	82	82	92	89	90	96
IV. Necked (Prolonged Hugging and Kissing)	46	43	64	56	69	65	81	77	82	84
V. Light Petting (Feeling Above the Waist)	27	31	41	40	49	55	66	65	71	71
VI. Heavy Petting (Feeling Below the Waist)	21	17	20	28	28	40	47	49	57	59
VII. Gone All The Way (Coitus)	10	10	10	17	13	24	23	31	27	35
VIII. Coitus With Two or More Partners	7	4	4	5	4	10	8	13	8	14

*Have participated at least once in sexual activity.

Vener, A. M., and Stewart C. S. America revisited: 1970-1973. Journal of Marriage and the Family, 1974, 36, 4, 728-735.

3. There were significant increases between 1970 and 1973 in the percentages of 14 and 15 year old boys who experienced sexual intercourse.

Interest in and participation in sexual activity begins in childhood and progresses throughout each stage of the life span. The effects of adequate information as well as positive and negative conditioning at each stage have critical effects on healthy sexual functioning in succeeding stages (Masters and Johnson, 1966, 1969; Kaplan, 1974).

Factors influencing sexual behavior have been identified recently in clinical settings by therapists working with sexually dysfunctional couples. A variety of factors (Kaplan, 1974) that contribute positively and negatively to sexual responsiveness have emerged and are reported in Table 28. These factors are largely related to early learning and experiences of sexual behavior, communication about sexuality, as well as acceptance of sexual responsibility for self. The effects of these are cumulative in that positive or negative influences upon sexual behavior may have life-long positive and negative effects on sexual behavior. Negative influences on sexual responsiveness may result in sexual dysfunction or lack of sexual responsiveness in an individual. Positive influences, on the other hand, seem to be associated with normally occurring sexual responsiveness (Masters and Johnson, 1966, 1969).

Sources of Information about Sexuality

Young people have acquired both sexual experiences and sexual information at earlier ages than in previous generations. Same-sexed peers have been the most significant sources of sex information about sexual behaviors such as petting and intercourse. Parents, churches, and schools traditionally have provided very little sex-related information (Martinson, 1968; Thornburg, 1970, 1972; Spanier, 1972). When these institutions have provided information, the information has related to non-behavioral aspects of sexuality such as menstruation, reproduction, and venereal disease. Independent reading among youth has been a significant source of sex information. However, Rubenstein, Watson and Rubenstein (1977) found most of the books in print before 1971 to be inadequate in their presentation of information.

According to Gebhard (1977), mothers have become increasingly important sources of sex information for their children. Adolescents frequently have expressed a desire to talk with their parents about sex (Sorensen, 1973), yet these same adolescents believed their sexual values to be quite different from those of their parents. However, when sexual attitudes of parents were measured and compared with those of their college-aged children, parents' sex attitudes were significant predictors of sons' and daughters' attitudes (McNab, 1976).

Table 28

FACTORS POSITIVELY AND NEGATIVELY INFLUENCING HUMAN SEXUAL RESPONSIVENESS

POSITIVE FACTORS	NEGATIVE FACTORS
Immediate Causes of Sexual Responsiveness	
Education, correct information about sexual behavior. Communication with partner. Acceptance of responsibility for one's own sexuality. Freedom from guilt, fear, anxiety. Mutuality in giving and receiving sexual pleasure.	Ignorance related to sex. Failure to communicate. Fear of failure. Emphasis on performance in sexual relationships. Defense against erotic feelings.
Relationship Factors Influencing Sexual Responsiveness	
Partner acceptance. Partner warmth.	Partner rejection. Partner hostility.
Psychological Factors Influencing Sexual Responsiveness	
Guilt-free giving of erotic pleasure. Guilt-free receiving of erotic pleasure.	Prohibitive childhood experiences and education. Moralistic/religious belief that sexual pleasure is sinful. Lack of socialization with parents and peers.

Table 28 (continued)

POSITIVE FACTORS	NEGATIVE FACTORS
Learned Factors Influencing Sexual Responsiveness	
Sexual response associated with positive contingencies.	Sexual response associated with negative contingencies.
Lack of traumatic events, e.g. rape.	Traumatic events, e.g., rape.
Relaxation.	Fear of "being caught."
Participation between consenting adults out of the sight of others.	Threatening, humiliating, or unpleasant events following sexual expression.

*Adapted from: Kaplan, H. S. The new sex therapy. New York: Quadrangle/The New York Times Book Co., 1974.

Although there has been a demonstrably direct transmission between parents and their children regarding sexual knowledge and attitudes, there has been a conspiracy of silence between parents and youth with regard to sexual activity. Furstenberg (1976) in a study of teenage childbearing found that mothers of sexually active young women failed to invite discussion related either to sexual activity or birth control. Likewise, the sexually active daughters attempted to conceal their sexual activity from their mothers. Mothers were unwilling or unable to acknowledge their daughters' sexual activity and need for birth control. Similarly, daughters hid sexual activities from their mothers. This mutual deception was most likely a consequence of a restrictive social system that prohibits sexual activity rather than a consequence of a permissive sexual system that fosters sexual activity.*

Of the adolescents seeking contraceptive sources from family planning clinics, 55% revealed that their parents knew of their actions, while 45% reported that their parents did not know. Parental awareness of attendance at clinics was higher for younger teenagers than for older teenagers. Teenagers who had not informed their parents of their attendance reported that they would stop coming to the clinic if their parents were informed. Many in this group would have risked unprotected coitus rather than have their parents know of their sexual activities (Torres, 1978). Elsewhere, (Garris, Steckler, and McIntire, 1976; Cahn, 1977; Gispert and Falk, 1978) it has been reported that one of the major reasons that adolescents fail to seek contraception is the fear of parental discovery. Thus, there has been a reluctance of teenagers and their parents to acknowledge and discuss sexual activity.

Adolescent Interest in Sexuality

Adolescents possess a lively, personal interest in sex-related activities and sex-related topics. Teachers have reported high student interest in instruction related to sexual topics. Of particular interest among late junior high students were the following topics: biological aspects of sex and reproduction, pregnancy prevention, venereal disease, male/female relationships, and sexual responsibilities (Kleinerman, Grossman, Breslow, and Goldman, 1971; Harnett, 1972).

Unfortunately, relatively few studies have examined the sexual behavior and interest of large samples of students aged 13-15. One interesting study (Rubenstein, Watson, Drolette, and Rubenstein, 1976) investigated sexual interests of 130 ninth grade boys and girls

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* This theory of restrictiveness/permissiveness differed significantly from commonly held stereotypes of black socioeconomic culture and was also suggested by Miller in 1973.

in the Boston area. Each youngster was asked to check a list of 112 sexual concepts by indicating how much more he/she wanted to learn about each topic. The concepts of greatest interest to boys and girls are reported in Table 29.

Table 29

SEXUAL TERMS OF INTEREST TO BOYS AND GIRLS

GIRLS	BOYS
Birth control	Venereal disease
Abortion	Enjoyment of sex
Birth control pill	Sexual intercourse
Venereal disease	Birth control
Pregnancy	Love
Love	Oral intercourse*
Fear of sex	Pregnancy
Guilt about sex	Abortion
Rape*	Guilt about sex
Enjoyment of sex	Birth control pill
Sexual intercourse	Fear of sex
Sexual offenses	Sexual offenses
Prostitution	Prostitution

*This term was not among the top 13 terms of the opposite sex.

The interests of boys and girls closely paralleled one another and were related to sexual intercourse and its consequences and context. Girls were slightly more interested in pregnancy and birth control, while boys were more interested in pleasure.

Pursuing the same question in a different manner, Rubenstein et al. (1977) analyzed 31 sex education books published between 1954 and 1971 for adolescents. The books were rated on the basis of whether their contents dealt with the "top 13 terms" moderately, minimally, or not at all. Only 20% of the books were judged to be impartial, while the remainder were found to be highly moralistic in tone. Those that were religious in nature provided the least amount of sexual information. Sources chosen frequently by young people apparently were not adequate in providing information related to sexuality.

Since adolescent and pre-adolescent samples have been difficult to obtain for research purposes, most investigators have found it necessary to employ unobtrusive measures or high inference techniques to determine teenage interests, values, and behaviors. One of the most interesting of these studies (Peretti, Carter, and McClinton, 1977)

obtained data by observing graffiti (figures, designs, or words inscribed on walls, rocks, or sidewalks). This anthropological study of written inscription on bathroom walls and facilities in four schools provided insights into the sexual interests of seventh and eighth grade boys and girls ranging from 12 to 16 years of age.

Five broad categories of graffiti were observed: sexual maturity, self identity, idealism, iconoclasm, and rebelliousness. The greatest number of graffiti drawn by both sexes related to sexual maturity. Within the concept of sexual maturity three subconcepts were found: sexual activity, sexual desire, and sexual role. Boys produced the greatest number of inscriptions about sexual activity, followed by sexual desire. The greatest number of inscriptions drawn by girls related to sexual desire followed by sexual activity. Both boys and girls had the fewest number of inscriptions related to sexual role (Peretti et al., 1977).

Parental Preferences Related to Sexuality Education

Young people have clearly stated that their parents have been inadequate in providing sex information. Parents, too, have reported themselves as being inadequate in the task (Potter and Smith, 1976). Dearth (1974) found that groups of experts, students, and parents support human sexuality education in the classroom. These three groups expressed the following ideas as to the leadership and content of such a program:

1. All three groups believed that the leader should be honest, straightforward, and sincere.

2. All three groups believed the leader should answer all questions asked by the students.

3. Parents and students supported bringing in outside experts to talk to classes, while the experts themselves were less supportive of this practice.

4. Large percentages of experts (70) and students (61) believed that the leaders should be allowed to use four letter words while a great percentage of parents (63) were strongly against the use of this kind of language.

5. A majority of parents believed that leaders should stress negative consequences of premarital sex, while a majority of experts and students did not.

6. Parents were equally split in terms of favoring dealing with the topic of masturbation, while 85% of the students definitely believed that the topic of masturbation should be discussed in the classroom, as did approximately 2/3 of the experts.

It seemed that parents favored education related to sexuality but consensus among the three groups was not achieved, students and experts favoring a more open approach than parents.

Parents usually have strong preferences as to the appropriate sources related to sexuality education (Libby, Acock, and Pane, 1974). A majority of parents (85%) in Libby's research favored a combination of home, school, and church, even though these institutions were not the sources of their own sex information. The fathers' major source of sex information was peers; the mothers' major source of sex information was their mothers. Preference varied, however, according to the age of the child. Parents of pre-pubescent children preferred the combination of home and church. Fathers typically were more concerned about the sexuality education that their children received; they generally were more conservative than mothers and preferred church as a source of information. Parents undoubtedly felt that methods of the past were inadequate, yet they clearly did not want the home to be supplanted as a source of sex information.

Parental personality variables (autocratic vs. democratic) were significant predictors of views toward adolescent sexual behavior and education (Libby and Nass, 1971). Autocratic parents believed that their own parents had provided adequate information and were attempting to provide sex information for their own children in the same way.

Democratic parents believed their own parents had not presented adequate information and were trying to do better with their own children. Neither group approved of totally unrestricted courtship standards for youth.

A study (Conley and Haff, 1974) conducted in the Champaign-Urbana area of Illinois revealed very favorable attitudes of parents toward family life education that included sex-related topics. Attitudes of parents and students were as follows:

1. Parents were most favorable to family life education at all grade levels and in most cases were more in favor than were students.

2. Both parents and students were overwhelmingly in favor of dealing with morals and values in the classroom.

3. A large percentage of parents and students felt that parents did not provide sufficient sex information for their children.

4. Both parents and students felt that home, school, and church should be active in family life education.

In general, only very small percentages of the same group of parents agreed with the following statements:

1. The teaching of sex education in the schools will destroy the morals of children.

2. Sex education should be given only in the home.

3. Sex education in the schools is an invasion of family rights and privacy.

4. Most parents are capable of teaching their children sex education.

These findings in a large university town were not surprising since it has been documented elsewhere that the greater an individual's knowledge of sexuality, the more likely he/she would favor sex education (Lee, 1952). Ryan (1978) found similar favorable attitudes among ninth grade students and their parents for inclusion of sex education in home economics curriculum.

Using four annual Gallup poll surveys as a basis, Blake (1973) reported increased public approval for nationwide programs of birth control. In 1969 men (69%) typically were more in favor of birth control education than women (58%). By 1972 approval by men and women alike had risen to 71%. Catholics did not differ significantly from non-Catholics in their high percentages of approval of birth control education. The least amount of approval came from economically disadvantaged groups who seemed to receive the least amount of birth control information in the home. In these four Gallup surveys, there was clear evidence of increased support over time for birth control information.

In the same surveys, support for providing birth control services to adolescent women was not as strong. Percentages of both sexes approving birth control services rose from 38% in 1969 to 54% in 1972. Support for provision of health programs giving birth control services free to teenagers rose with the educational level of respondents, those with only a grade-school education being less supportive than those with a college education.

In the same Gallup poll surveys only 19% of the total population in 1969 said that premarital sex was not wrong; in 1972, 30% said premarital sex was not wrong. Thus it was demonstrated that permissiveness toward premarital sexual relations was less acceptable than approval for birth control services. Blake (1973) hypothesized that the prevailing lack of permissiveness has undoubtedly delayed widespread provision of services for birth control information.

These data document the fact that attitudes often lag far behind actual behaviors, and perhaps suggest one reason why adolescents have not effectively used contraceptive services that have been available: they have not believed that what they were doing was entirely right.

Parents and community members at large have expressed general support for education related to sexuality. It is clear, however, that this support is accompanied by a reluctance to accept the sexuality of their children. There also has been a tendency to favor programs that did not deal openly with explicit sexual issues. Mary Calderone summarized the issue well over a decade ago:

> ...I will emphasize my conviction, that if by some magic young people under twenty could have sexual experience without resulting pregnancies, so that all of their sexual activities could remain under cover and unknown to us, we wouldn't be here...Let's admit, then, that what we're worried about is not only VD and pregnancies, but also, that we'll have to provide contraception, with the inevitable implication that we are thereby approving their sex activities--be, indeed, implicated in them as 'accessories before the fact.' This is what sticks in our gullets (1966, pp. 37-38).

Best results of family life education undoubtedly will occur when the public schools along with parents and community groups agree to and operationalize the concept of shared responsibility (Gordon, 1976).

Incidence of Intercourse Among Adolescents

The subject of adolescent sexual behavior has been the focus of several major investigations in the last decade. In 1971 Zelnik and Kantner conducted a study related to adolescent sexual behavior, using a large national probability sample of adolescent women aged 15 to 19 who were living in private residences or college dormitories. An independent follow-up to this study was conducted in 1976. Results of those studies are found in Table 30. This study was interpreted in the following ways:

1. In 1971, 27% of American adolescent women had experienced sexual intercourse; by 1976, 35% of American adolescents women had experienced sexual intercourse. This represents a 30% increase in the prevalence of intercourse over the five-year period.

2. Intercourse among blacks tended to be more prevalent than among whites at 15 years of age. The proportionate change among blacks and whites between 1971 and 1976 tended to be the same for both races at age 15. After age 15, the proportionate change was two items greater for whites than blacks at every age.

3. In 1976 a total of 63% of the black females reported having sexual intercourse while 31% of the white females reported having sexual intercourse.

TABLE 30

PERCENT OF NEVER-MARRIED WOMEN AGED 15-19 WHO HAVE EVER HAD INTERCOURSE, BY AGE AND RACE, 1976 and 1971*

Age	Study year and race										% increase 1971-1976		
	1976					1971							
	All	White		Black		All	White		Black		All	White	Black
		%	N	%	N		%	N	%	N			
15-19	34.9	30.8	1,232	62.7	654	26.8	21.4	2,633	51.2	1,339	30.2	43.9	22.5
15	18.0	13.8	276	38.4	133	13.8	10.9	642	30.5	344	30.4	26.6	25.9
16	25.4	22.6	301	52.6	135	21.2	16.9	662	46.2	320	19.8	33.7	13.9
17	40.9	36.1	277	68.4	139	26.6	21.8	646	58.8	296	53.8	65.6	16.3
18	45.2	43.6	220	74.1	143	36.8	32.3	396	62.7	228	22.8	35.0	18.2
19	55.2	48.7	158	83.6	104	46.8	39.4	287	76.2	151	17.9	23.6	9.7

Note: In this and subsequent tables: Base excludes those for whom no information was obtained on intercourse; this amounted in 1971 to 1.2% of the never-married blacks and 1.3% of the whites; and, in 1976, to 0.9% of the blacks and 0.7% of the whites. Percentages for whites and blacks are computed from unweighted data (Ns in tables); percentages for total sample are computed from weighted data and thus may sometimes appear to be inconsistent with figures by race. Figures for 1971 differ from earlier published reports because they exclude women living in group quarters. Except where indicated, the base excludes women who did not respond to the question analyzed in the table.

*Zelnik, M. and Kantner, J. F. Sexual and contraceptive experiences of young unmarried women in the United States, 1976 and 1971. Family Planning Perspectives, 1977, 9, 2, 56.

4. Among all women 15 years of age, 18% reported they had experienced sexual intercourse; 55% of the 19-year-old women reported they had experienced intercourse. (The researchers reported that the increase in prevalence of intercourse is accompanied by a reduction of four months in the average age of first intercourse among females.)

Using data from their 1971 and 1976 studies, the same researchers (Zelnik, Kim, and Kantner, 1979) estimate that 20% of all U.S. females have intercourse by age 16 and two-thirds by age 19. Sexual activity results in pregnancies to 10% of all adolescent women under age 17 and 25% to all adolescents under 19 years of age.

Sorensen (1973) conducted a major study related to adolescent sexual behavior. His sample, consisting of 508 boys and girls aged 13 to 19, was most likely biased in favor of sexual liberalism since he had a 46% sample loss.* He found that 52% of all American adolescents have had sexual intercourse, including 59% of the boys and 45% of the girls. Among the girls in this sample, 9% had premarital intercourse by age 13 and 25% had intercourse by age 15. This finding seemed to indicate a high frequency of intercourse among young adolescents, but it may have been influenced by the sampling bias.

In 1970 and 1973 Vener and Stewart used cross-sectional samples of students in three Michigan communities to measure incidences of adolescent sexual behavior. The data from the first study did not reveal significant changes in sexual behavior in three decades (Ramsey, 1943; Kinsey, 1948, 1953). When the study was replicated three years later, significant increases in intercourse among 14- and 15-year-olds of both sexes were found. Over the three-year period there was also a significant increase in the number of boys and girls who had intercourse with more than one partner. Although there was a possibility that this was a temporary change in behavior, it was probably an index of the whole social climate of that school as sexual behavior was significantly correlated with the use of illicit drugs and alcohol (Vener and Stewart, 1974).

Similarly, Jessor and Jessor (1975) conducted a longitudinal study over a four-year period beginning with high school and college freshmen males and females. Within the high school sample the proportion of nonvirgins were as follows:

	Males	Females
9th grade/1969	9%	5%
10th grade/1970	10%	13%
11th grade/1971	22%	36%
12th grade/1972	33%	55%

*Sorensen had requested parental permission for a three-hour interview with each adolescent. In responding negatively to this request many parents denied sexual activities and interests of their adolescent children.

Male loss of virginity increased at a steady rate in grades 10-12, while percentages of females experiencing intercourse rose sharply in the eleventh and twelfth grades.

A marked increase in frequency of intercourse has been reported among adolescents (Zelnik and Kantner, 1977). Given the pathological approach used in many disciplines with respect to sexual intercourse, one might well expect young people are "doing it more, but enjoying it less." This was not corroborated by Sorensen (1973). In evaluating their first intercourse experience, 54% of the girls and 67% of the boys agreed with the statement, "I'm glad I did it when I did." Girls were three times more likely than boys to agree with the statement, "I wish I had waited until I was older before having sex with a boy the first time." Boys were three times more likely than girls to have agreed with the statement, "I wish I had done it when I was younger." These findings were similar to those of Carris et al. (1976) as well as those of Kinsey (1953) and Kirkendall (1961) in previous generations. Thus, a majority of teens reported they were satisfied with the timing of their first intercourse. When dissatisfaction with timing arose, there was a slight tendency for boys to desire their first intercourse to be earlier and a slight tendency for girls to desire their first intercourse to be later.

Adolescent sexual behavior has increased during the decade of the 1970's. Interestingly, this increase is not unlike changes that occurred in the adult population during the decades of the 60's and 70's. Morton Hunt acknowledged this development in his survey related to sexual behavior in the 1970's. In discussing changes in sexual behavior he said:

> Yet improvement is widespread and real. The present survey, as we are about to see, indicates that since Kinsey's time marital sex in America has become a good deal more egalitarian (with husbands being more considerate of their wives' needs, and wives assuming more responsibility for the success of intercourse); that husbands and wives are much freer in terms of the kind of foreplay and coital positions they use; that the conscious pursuit of sensuous pleasure in marriage has become much more acceptable to both sexes; and that there is a considerable increase in the percentage of marital sexual experiences that yield genuine satisfaction to both persons (Hunt, 1974, p. 179).

Thus, Americans of all ages have experienced a revolution in terms of sexual behavior.

Given the magnitude of these changes many researchers believe that pregnancy prevention will be accomplished by reduction in the number of conceptions occurring to adolescents rather than frequency of intercourse (Settlage, Baroff, and Cooper, 1973; Johnson, 1974; Tietze, 1978; Zelnik and Kantner, 1978).

Factors Influencing Premarital Sexual Behavior

For several generations, individuals and families have espoused rather traditional, conservative positions on sexual topics while engaging in personally permissive behaviors. Kinsey (1953) noted increased premarital sexual activity among females beginning in the 1920's. This marked a significant departure from the behavior of women in previous generations. Reiss (1976) suggested that during the four following decades value shifts were consolidated. In recent years, investigators have noted a liberalization of attitude toward sexual behavior--frequently called "permissiveness with affection." A number of writers have chronicled this change.

Following the 1920's, clearly most recent studies related to attitudes toward sexual behavior suggest that permissiveness with affection is the dominant norm and that the double standard of sexual behavior has shifted (though it has not completely disappeared) to more closely approximate a single standard for men and women (Martinson, 1968; Bell and Chaskes, 1970; Christensen and Gregg, 1970; Middendorp, Brinkman, and Koomin, 1970; Joesting and Joesting, 1974).

There has generally been a lag between sexual practices and society's attitudes toward them, with changes in practice preceding changes in attitudes. The U.S. society has moved from "an orthodox double standard ethic of premarital sexuality, which allowed males to copulate but which condemned their partners as 'bad' women, to a more modified version of the double standard wherein women are allowed to have premarital coitus but not with quite the abandon that men are" (Reiss, 1976, p. 190). That is not to say that these two standards of behavior have become discrete phenomena, as some individuals have been less than clear in their value orientations. Furthermore, some have been egalitarian in a restrictive direction, believing that premarital sex is wrong for both men and women, while others have been egalitarian in a permissive direction, believing that premarital sex is acceptable for both men and women. There are still individuals who adhere to a traditional double standard of behavior.

Sexual response may initially be interpreted as biological and natural sexual behavior; it is a complex phenomenon and influenced by a number of factors. Sexual behaviors of adolescents vary both quantitatively and qualitatively; thus, it is instructive to examine specific factors associated with sexual behavior in general with particular emphasis on teenaged individuals. Because many studies have been conducted on college-aged and adult samples, it is necessary to examine these and make inferences regarding the population for whom pregnancy prevention skills were identified (adolescents fifteen years of age and under).

The effects of socioeconomic status and religiosity on premarital sexual behavior have been examined by several researchers. Kinsey (1948, 1953) established that lower classes were more sexually permissive than upper classes. Reiss (1964, 1965) later examined the relationship of socioeconomic status, religiosity, and sexual permissiveness. Using church attendance as an index of liberalism and

conservatism, he found that among conservatives (those attending church frequently) premarital sexual permissiveness declined with an increase in socioeconomic status. Among liberals (those attending church infrequently) premarital sexual permissiveness increased with an increase in socioeconomic status.

Recent studies of adolescent sexual behavior revealed that religiosity was associated with sexual behavior. Young people who viewed themselves as highly religious were less likely to have had premarital intercourse than those who did not view themselves as highly religious. Likewise, young people who did not attend church had the highest rates of sexual intercourse. These tendencies were influenced by two factors. The first of these was free choice in church attendance. If church attendance were not voluntary, then these relationships did not hold. Second, religious involvement did not have an inverse relationship in the sexual permissiveness of blacks (Roebuck and McGee, 1977; Chilman, 1978).

One of the determinants of sexual behavior is cultural norms. Christensen and Gregg (1970) conducted a study of changing sex norms in America and Scandinavia. Utilizing samples of college students in three regions (restrictive, moderately restrictive, and permissive cultures), they found that permissiveness or approval of premarital coitus increased over a decade (1958-1968) and was positively related to regional differences.

Negative accompaniments of coitus were also studied by the same researchers. Incidence of coitus because of pressure by partner was more frequent in restrictive cultures than in permissive cultures, more frequent among females than males, and more frequent in 1958 than in 1968. Furthermore, guilt or remorse following coitus was generally higher in the restrictive cultures than in the permissive cultures, generally higher for females than for males, and consistently higher in 1958 than in 1968.

Christensen and Gregg noted a tendency of individuals who adhered to cultural norms to view themselves positively with the result that in permissive cultures, high self-esteem individuals had more coital partners. In a nonpermissive culture, highly permissive individuals were low in self-esteem with negative accompaniments to premarital coitus, most notably, guilt.

The effects of peer pressure as a norm have been associated with premarital sexual intercourse. Females have relied on male partners to define sexual activity with little or no support in their peer groups. Males, on the other hand, have had a greater tendency to conform to peer expectations in regard to sexual behavior, particularly in the early stages of the sexual relationship (Mirande, 1968; Carns, 1973).

While external norms have certainly guided initial sexual behavior, personal norms may be developed between partners as the relationship evolves. Collins (1974) studied the progression of relationships

through several stages: first date, several dates, steady dating, and consideration of marriage. Males tended to be more intimate than females in the early stages of the dating relationships. As commitment to the relationship increased, female behavior became more intimate, approaching male levels. As the relationship progressed, males and females alike perceived peer-group couples in same-staged relationships to be more intimately involved. Thus, couples undoubtedly felt pressure to conform to peer-group expecations (Collins, 1974).

Of equal importance with cultural norms in guiding premarital sexual behavior of adolescents is moral reasoning capability. Schoof-Tams, Schlaegel, and Walczak (1976) reported a shift in moral reasoning among adolescents between the ages of 11 and 16 years of age. Young adolescents viewed sexuality mainly for the purpose of procreation while older adolescents viewed sexuality as an integral part of a marriage and family orientation to a lover-partnership/solidarity position. Accompanying this change was increased permissiveness related to masturbation and premarital intercourse.

The above findings were consistent with those of Sorensen (1973), who found that the concept of premarital sexual intercourse was becoming outmoded. Although a large proportion of the young people in his sample (85% of the boys and 92% of the girls) had a desire to get married and have children, 72% agreed that a couple does not have to marry to live together. In making sexual decisions, young people often applied a situation ethic, meaning that "they will do what they believe is best to meet the requirements of the situation" (Sorensen, 1973, p. 363).

Using college-aged students, Jurich and Jurich (1974) studied the effects of cognitive moral development upon the selection of premarital sexual standards of behavior. Among subjects whose levels of cognitive moral development were low, the following sexual standards predominated: traditional morality, the double standard, or permissiveness without affection. Among those individuals with a moderate level of cognitive moral development, permissiveness with affection predominated. Subjects with a high level of cognitive moral development selected a nonexploitive permissiveness without affection standard of premarital sexual behavior. Succeeding levels of cognitive moral development require increasingly sophisticated modes of thinking in selection of the premarital code of behavior.

These findings were expanded by D'Augelli and D'Augelli (1977) who examined levels of moral reasoning, premarital sexual behavior, and relationship reasoning among college-aged couples. A decision about sexual behavior requires a moral decision, as well as an evaluation of the sexual act itself against an internalized standard of behavior, with sex guilt resulting from violations of personal norms of behavior. This process of making a moral/sexual decision is, of course, compounded by an interpersonal transaction between sexual partners.

Using standardized tests for measurement, Jurich and Jurich (1974) examined the relationship of sexual guilt, cognitive moral development and permissiveness among college-aged men and women. The following results were obtained:

1. Sexual guilt (the result of violating personal norms for behavior) is associated with permissiveness.

2. The less experience women had, the higher their sexual guilt.

3. Women at the stage of law and order moral reasoning have significantly greater sex guilt than did women at other stages of cognitive moral development.

When guilt feelings of sexually active couples were examined, it was found that guilt for men was significantly and inversely associated with sexual experience with all partners, but guilt for women was not associated with sexual experience with any partner. Partners' sex guilt correlated positively with one another. Therefore, it was concluded that guilt evolved from a couple's decision to have sex.

The same authors (Jurich and Jurich, 1974) hypothesized that there were three levels of relationships similar to Kohlberg's stages of cognitive moral development:

1. Egoistic reasoning based on cost-benefit ratio, specifically in terms of rewards from partner.

2. Dyadic reasoning based on socially defined, perceived expectations of the partner within the relationship with specific emphasis on fulfillment of role expectations.

3. Interactive reasoning based on a couple's mutual notion of responsibility with emphasis upon changing nature of the relationship as well as attention to the agreed-upon responsibilities, norms (consistent with changing needs and values) and choices made through dyadic decision-making.

These forms of decision-making within the relationship enable the partners to move through self-centered and peer-oriented decision-making to independent decision-making based on mutual respect. Frequently, the individual in a dating relationship who was the least committed had the greatest amount of power (Skipper and Nass, 1966) and may have controlled sexual decision-making. The Jurichs' hypothesized that when both partners are able to deal in interactive reasoning, decisions are based on what involved individuals believe to be right and wrong. Furthermore, since these levels of interacting are sequential, an individual capable of interactive reasoning is not likely to base decisions regarding sexual intercourse on peer expectations or self-centered needs of the partner.

Many role behaviors influence sexual behavior (Mendelson, 1973). Cvetkovich, Grote, Lueberman, and Miller (1978) established a relationship among sex role attitudes, sexual behavior, and contraceptive use. They found that non-virgins held somewhat traditional sex-role stereotypes, subscribing to the notion of differences between men and women in occupational and family functions. Virgins, indicating that they were not yet ready for intercourse but might have intercourse before marriage, held relatively non-traditional views of the roles of men and women in occupational and family functions. Similarly, Miller et al. (1974) found that young people with college aspirations deferred sexual intercourse longer than young people who did not plan to go to college. On the other hand, virgins, who planned not to have intercourse before marriage, held the most extremely stereotyped sex-role attitudes.

Research to date demonstrates that moral reasoning enters into the couples' sexual decision-making process. The level of cognitive moral development has been associated with standards of sexual permissiveness. Less clear, however, are the effects of cognitive moral development and role perceptions on decision-making in the relationship. Negotiations related to sexual behavior occurred in relationships. Utilization of interactive reasoning in sexual relationships might provide for a rational decision-making process related to sexual behavior (Jurich and Jurich, 1974).

Adolescent Contraceptive Behavior

With marked increases in the numbers of pregnancies reported among adolescents in the late sixties and early seventies, researchers turned their attention to the incidence of sexual intercourse and frequency of contraceptive behavior. The reported incidence of sexual intercourse for adolescents increased and was extended to younger age groups during the 1970's. These trends were accompanied by increased use of contraceptives. Birth control pill usage among adolescents was twice as great in 1976 as in 1971. Use of the condom, douche, and withdrawal methods of contraception decreased substantially between 1971 and 1976, but the rhythm method, not considered reliable for adolescents, was used more frequently during the five-year-period. In the same period, accuracy of information related to the use of the rhythm method also increased (Zelnik and Kantner, 1978b).

In the Zelnik and Kantner (1978b) sample, almost 40% of the young females who had premarital sexual intercourse used contraception the first time they had coitus. However, this figure was affected by race and age, as seen in Table 31.

Use of medically prescribed methods of contraception was significantly related to continued contraceptive use (Zelnik and Kantner, 1978). Eighty seven percent of the individuals who used medically prescribed methods of contraception at the outset continued this practice, whereas only 65% of the adolescents who initially used a nonmedically prescribed method continued contraceptive use without

medically prescribed contraceptives. Blacks were more likely to begin sexual activity with a medical method than whites (See Table 32).

Table 31

PERCENTAGES OF WOMEN USING CONTRACEPTION
AT FIRST INTERCOURSE*

Age at First Intercourse	Total %	White %	Black %
All	38.7	40.2	33.5
15	24.5	23.8	25.8
15-17	40.9	42.0	36.2
18-19	54.8	54.1	**

** N = Less than 20

* Zelnik, M. and Kantner, J. F. Contraceptive patterns and premarital pregnancy among women aged 15-19 in 1976, Family Planning Perspectives, 1978, p. 136.

Table 32

PERCENTAGE DISTRIBUTION OF ALWAYS-USERS OF CONTRACTPION
BY INITIAL METHOD AND RACE*

Initial Method	Total	White	Black
Medical	31.6	26.9	51.3
Nonmedical	68.4	73.1	48.7
All	100.0	100.0	100.0

*Zelnik, M. and Kantner, J. F. Contraceptive patterns and premarital pregnancy among women aged 15-19 in 1976, Family Planning Perspectives, 1978, 10, 3, 138.

Of the women who did not use contraceptives at the outset of coitus, 50% later chose medically prescribed methods, as compared to 25% of those who used contraceptives initially (Zelnik and Kantner, 1978).

With respect to age, the older an adolescent was at the time of first intercourse, the greater the probability that she would use birth control. Two other interesting findings were revealed in relation to age and race (Zelnik and Kantner, 1978). More young black women under age 15 were found to use birth control at first intercourse than were young white 15-year-olds. This pattern was reversed, however, within the 15 to 17 age groups in which a greater proportion of whites used birth control during first intercourse than did blacks. Examining this finding, Dryfoos and Heisler (1978) speculated that the location of family planning clinics may have influenced adolescent contraceptive behavior. Most family planning clinics were located in highly populated metropolitan regions. Maximum use of those clinics was made by low income blacks. White adolescents under 15 years of age and living in the suburban or rural areas reported difficulty in obtaining transportation to clinics in the city.

Of those individuals who utilized contraception at the time of first intercourse, Zelnik and Kantner (1978) reported that 25% used a medically prescribed method, most frequently the oral contraceptive. Approximately 20% of the whites and 50% of the blacks who used contraceptives at the time of first intercourse utilized medical methods. The older the female at the time of intercourse, the more likely she would use a medically prescribed method of birth control.

Planned contraception appears difficult for adolescents. First, coitus among adolescents is reported to be infrequent and unpredictable (Zelnik and Kantner, 1978). Secondly, choice of a contraceptive method by a young woman is generally related to her rapidly changing concept of self. Effective contraceptive usage requires the self-concept of a sexually active woman (Lane, 1973). In addition, studies show that teenagers are most knowledgeable about least accessible contraceptives (Ewer and Gibbs, 1975; Zelnik and Kantner, 1978a).

When contraceptive usage is examined in terms of pregnancy status of women, interesting patterns emerge as seen in Table 33 on the following page.

As patterns changed from never using contraception to always using contraception, frequency of pregnancy decreased significantly. Approximately 10 to 11% of the women who became pregnant always used contraceptives. Of the women who never used contraception, frequency of pregnancy ranged from 52 to 71%, with the higher percentage attributed to black women. Occasional use of contraceptives is significantly related to prevention of pregnancy. Furstenberg (1976) found that occasional contraceptive use delayed pregnancy for an average of two years. In any case, lack of contraceptive use in the previous month is considered the most significant predictor of pregnancy among adolescent women.

Table 33

PERCENTAGE DISTRIBUTION OF YOUNG WOMEN WITH PREMARITAL SEXUAL EXPERIENCE, BY CONTRACEPTIVE-USE STATUS, AND PERCENTAGE PREMARITALLY PREGNANT FOR EACH STATUS ACCORDING TO RACE*

CONTRACEPTIVE-USE AND PREGNANCY STATUS	TOTAL		WHITE		BLACK	
	%	N	%	N	%	N
Always Use	26.9	228	27.7	135	23.8	93
Ever Pregnant	10.9		11.2		9.6	
Sometimes Use	42.1	343	44.6	215	33.3	128
Ever Pregnant	23.9		22.6		30.0	
Never Use	31.0	312	27.7	147	42.9	165
Ever Pregnant	58.0		52.2		71.2	
Total	100.0	883	100.0	497	100.0	386

*This table refers to women with premarital sexual experience who were aged 15-19 in 1976. Zelnik, M. and Kantner, J. F. Contraceptive patterns and premarital pregnancy among women aged 15-19 in 1976. Family Planning Perspectives, 1978, 10, 3, 136.

Reliance upon the use of male methods of birth control also was significantly related to pregnancy. Furstenberg's (1976) pregnant adolescent women reported that male partners were frequently negligent or uncooperative in the use of male methods of contraception. This finding was consistent with those of Finkel and Finkel (1975) who determined that 55% of the sexually active males in their sample had unprotected coitus the last time they had intercourse. Many women in Presser's (1974) sample switched from male methods of birth control to female methods of birth control after the birth of their first babies.

Lack of attention to male methods of contraception is a serious deficiency in contraceptive information and education, despite the easy availability of the condom, its simple use, and relative lack of harmful side effects, compared to the oral contraceptive and the intra-uterine device for women.

This problem is confounded by several variables. Males typically have not been encouraged to participate in contraceptive decision-making in family planning clinics (Scales, Etelis, and Levitz, 1977). Secondly, males are affected in their response to and use of condom by the pharmacist selling the product. Positive attributes result in positive male reactions whereas negative attributes result in negative male reactions (Fisher, Fisher, and Byrne, 1976).

Contrary to popular opinion, most adolescent women who become pregnant do so accidentally. Jaffee and Dryfoos (1976) reported that in 1974 there were approximately 4 million sexually active adolescent women in the United States. Approximately 20% of all sexually active adolescent women became pregnant. Of these pregnancies, 67% were unintended. While 600,000 women gave birth to live infants, half of the births were intended (Table 34).

The Alan Guttmacher Institute (1977, p. 6) summarized the following recent changes that affected fertility in the U.S.:

1. The achievement of near-universal use of contraception among married couples.

2. Elimination of historic differences in contraceptive use between lower- and higher-income married couples.

3. Increased voluntary sterilization of men and women who have had the number of children they want.

4. Diffusion of legal abortion services.

5. A considerable decline in unwanted births.

6. A striking decline in fertility throughout the entire population.

7. Increased use of contraception by sexually active unmarried persons.

Thus, contraceptive and sexual behavior has both increased and improved for most adults. Despite these changes, the increase in the use of contraceptives by adolescents has not been proportionate with that of the adult population (The Alan Guttmacher Institute, 1977).

Table 34

ADOLESCENT SEXUALITY, CONTRACEPTION, PREGNANCY, ABORTION AND CHILDBEARING EXPERIENCE: A POINT-IN-TIME APPROXIMATION CIRCA 1974 (Numbers in 000s)

EXPERIENCE	NO. AND %
No. of women	10,205
No. of men	10,614
Sexually active women	4,295
Married	1,091
Unmarried	3,204
Sexually active men	6,899
Sexually active women at risk of unintended pregnancy	3,938
Obtained medical contraceptive services	
Clinics	1,966-2,122
Private doctors	1,113
Not obtaining medical contraceptive services	
Total pregnancies	1,022
Intended	355
Not intended	667
Total births	595
Intended	296
Not intended	299
Premaritally conceived	103
Intended	47
Not intended	56
Postmaritally conceived	282
Intended	204
Not intended	78
Out-of-wedlock births	211
Intended	45
Not intended	166
Abortions	280
Miscarriages	147
Pregnancy intended	88
Pregnancy not intended	59
% of pregnancies not intended	65
% births not intended	50

Frederick S. Jaffe and Joy G. Dryfoos, Fertility control services for adolescents: Access and utilization, Family Planning Perspectives, 1976, 8, 4, 172.

Factors Affecting Adolescent Contraceptive Behavior

Ignorance has been a major variable affecting adolescent contraceptive behavior (Hatcher, 1973). Zelnik and Kantner (1977) found that only 40.6% of their total sample of women between 15 and 19 years of age correctly perceived the time of greatest pregnancy risk within the menstrual cycle. The percentage was slightly lower for women between 15 and 17 years of age and slightly higher for women from 18 to 19 years of age. Coldsmith, Gabrielson, Gabrielson, Mathews and Potts (1972), on the basis of interviews with pregnant adolescent women, suggested that sex education programs focused on the mechanics of reproduction and birth, but failed to deal with masturbation and orgasm. The same women frequently were not told where they could go for contraceptive services. This might have been the most important part of an effective sex education program.

Another major area of ignorance was related to a lack of adequate, accurate information about contraception. Chilman (1978) and Furstenberg (1969) reported young people to be concerned about the serious side effects of the birth control pill, as well as the intrauterine device. Although the nature of side effects is a serious consideration (especially with these methods of birth control), other very reliable means of birth control have far less serious risks and side effects (Hatcher, Stewart, Stewart, Guest, Stratton, and Wright, 1978). Another excuse adolescents provided for not using birth control was the belief that contraception would interfere with sexual pleasure (Shah, Zelnik, and Kantner, 1975).

Guilt is a factor associated with a lack of retention of contraceptive information. Schwartz (1973), in a well-controlled study among 28 male and 28 female college students, investigated the relationship between sexual guilt, sexual arousal, and the ability to retain sexual information. Subjects were selected from a much larger group of students (180 on the basis of scores attained on the Mosher Forced Choice Guilt Scale). Half of the high guilt group and half of the low guilt group were assigned to subgroups that read erotic and neutral literature. Then all subjects were exposed to a lecture on a little-known topic related to birth control. A quiz on the lecture followed exposure. High guilt subjects retained less lecture information than did low guilt subjects. Schwartz found sexually stimulated individuals retained less information than did non-stimulated individuals and females retained more sexual information than males.

Jazwinski and Byrne (1978) investigated the relationship between contraceptive use and perception of the quality of relationships, using college-aged students. For men, the use of contraception seemed to be associated with good sex but not with love and caring. For women, on the other hand, contraception was associated with caring relationships. These differences, observed in a highly controlled experimental setting, may be indicative of serious obstacles in male-female communication about contraceptive use (Jazwinski and Byrne, 1978).

Several psychological theories have been offered as explanation of the failure of adolescents to use contraception during sexual activity. One major theory related to contraceptive behavior proposed by Lindemann (1974) who suggested "...that the less committed a young woman is to sex, the less likely she is to use contraception and the more likely, if contraception is used, that it will be a method such as the condom that does not involve much positive action or acknowledgement on her part" (Zelnik and Kantner, 1977, p. 68). Zelnik and Kantner supported this theory that more adolescents who had sexual intercourse only once reported using the condom than did their counterparts who continued sexual activity. Young adolescents were also reported to use male methods of contraception frequently (Zelnik and Kantner, 1972).

Lindemann (1974), using a sample of females aged 13 to 16, concluded that girls come to terms with their own sexual behavior gradually. During this process, three stages of contraceptive behavior occur:

1. Trust in luck.

2. Peer prescription--foam, condom, douche, rhythm, and withdrawal.

3. Medically prescribed methods.

In a study conducted with sexually active females at a large midwestern university, Reiss, Banwart, and Foreman (1975) found that the more consistently a woman accepted her own sexuality the more likely she would use contraceptives regularly. Specific variables related to effective contraceptive use were consistency in the endorsement of sexual choice, personal self-assurance, and a high degree of dyadic commitment with sexual partner.

Role perceptions of self have been associated with contraceptive use. In a study by Kane et al. (1971), black mothers interviewed shortly after childbirth appeared passive in their responses to contraceptives--motherhood being a source of positive self-esteem to those women. The women were as knowledgeable about birth control methods as a control group of white women but practiced contraception less consistently and less often than the white women. This suggested that the role of mother was more important to the black women than to the white women, and subsequently affected their contraceptive behavior. Similarly, Jekel et al. (1975) found that highly motivated, school-oriented adolescent mothers will effectively use contraception, while adolescent mothers who are highly oriented to the role of motherhood are less consistent in their use of contraception. Rainwater (1968) found sex-role stereotyping in lower-class families to be related to ineffective contraceptive use.

Several researchers claimed that the reason for the lack of contraceptive use by adolescents was the prevalent attitude that planned sexual behavior is evil, while spontaneous sexual activity is a more

forgiveable action (Zelnik and Kantner, 1972, 1975; Bragonier, 1973). Bragonier (1973) stated that until responsible sexual behavior replaces this irresponsible romantic notion, there is little hope that adolescents will use contraceptives during the first intercourse.

Bender (1973) revealed that although a large percentage (84%) of females might engage in premarital intercourse, they themselves would not start taking the oral contraceptive until after they had found someone with whom they wished to have intercourse; nor did they expect their dates to carry a condom. The female subjects believed that both parties were responsible for birth control but did not expect either to be "prepared" ahead of time. Responses of males were quite similar to those of the females.

Both sexes indicated that they wished their first coital experiences to be spontaneous and indicated that they would proceed having coitus interruptus or intercourse without contraception, "hoping for the best." This lack of rational decision-making was attributed in part to a double standard in which a female is expected to "succumb to her lover."

Several researchers (Miller, 1973; Furstenberg, 1976) suggested that adolescents who did not use birth control were those who were engaging in a behavior that was not condoned in their larger culture. In other words, adolescents who believed that they were doing wrong were unlikely to practice contraception. This explanation seems related to the findings of Pohlman (1969), Zelnik and Kantner (1972, 1977), Schwartz (1973), Lindemann (1974), and Reiss, Banwart, and Foreman (1975), who demonstrated that consistency of choice in sexual standards and a lack of sexual guilt lead to effective contraceptive behavior.

Of the one million adolescent pregnancies occurring annually, one third are intended (Jaffee and Dryfoos, 1976). Bragonier (1973) studied the motives of expectant mothers and found that many women want pregnancy consciously or subconsciously for a number of reasons which prevent them from using effective birth control. These reasons included the following: securing a husband, establishing feminine independence, acting out at parents, defense against depression and emptiness, fear of sterility, curiosity about pregnancy, and the absence of negative feelings about unwed motherhood. Some adolescent women consider the risk of becoming pregnant as the punishment for having sexual intercourse.

Contraceptive Services for Adolescents

In 1975 there were 4.1 million adolescent women at risk of unintended pregnancy. Approximately 2.9 million or 71% of these women did not receive contraceptive services from clinics. It was estimated that 1.2-1.3 million of those adolescents received contraceptive services from private physicians. Thus, approximately 1.6-1.7 million sexually active teenagers had no known source of medical

care while 1.2 million sexually active teenagers received medical family planning services in one of the 5,272 family planning clinics in the United States. This meant that only 29% of all sexually active women were served by clinics (Guttmacher Institute, 1978).

During the same year in the state of Florida, 199 clinics were reported to be operating, serving 129,790 women between 15 and 19 years of age. This left 84,000 or 65% of the sexually active women at risk of pregnancy unserved by organized clinic programs with unknown numbers seeking services from private physicians (Guttmacher Institute, 1978).

Several factors have been associated with the number of adolescents who are served by family planning clinics. The location of the clinics was found to be important to adolescents according to an Alan Guttmacher Institute study (1975). If the clinics were located in the suburbs, transportation was a problem and potential adolescent clients were underserved. The most underserved adolescents resided in the outer metropolitan areas, where few public health facilities existed and acceptance was limited. Another measure of a successful clinic was its success in serving large numbers of low- and marginal-income adult women. A high correlation existed between the percentage of teenagers and the percentage of all low- and marginal-income adult women served by the clinics. Also, the number of clinics in a community and the diversity of their services directly affected the level of adolescent services (Guttmacher Institute, 1975).

There appeared to be little need to create new delivery systems to provide adolescents with contraceptive services (Guttmacher Institute, 1975). Torres (1978) found that 55% of the teenaged patients in 53 U.S. family planning clinics reported that their families knew of their attendance. Most of the other sexually active women seeking services in these family planning clinics would have chosen to have unprotected coitus had it been necessary to have written parental approval for receipt of contraceptives. Several other researchers also found that adolescents feared adverse parental reactions to knowledge of their children's sexual activity and need for contraceptive services (Garris, Steckler, and McIntire, 1976; Cahn, 1977; Gispert and Falk, 1978).

Florida law states that minors can receive "maternal health and contraceptive information of a non-surgical nature if the minor is married, a parent, or pregnant, has parental consent or who may suffer in the physician's opinion probable health hazards if the services are not provided" (Guttmacher Institute, 1975, p. 11). Every effort is made to include the parent in this decision. A minor who does not meet these conditions should be counseled regarding the hazardous side effects of her chosen contraceptive before it is issued. This is known as informed consent.

Hatcher and his associates discussed the issue of informed consent in Contraceptive Technology 1978-1979:

> The importance of informed consent in the area of family planning has three bases: (1) pragmatic; (2) ethical; and (3) legal. Pragmatically, a patient who thoroughly understands the contraceptive method chosen will be better able to use it. Ethically, every patient has a right to such information. Legally, the physician must provide adequate information in order to permit the patient to reach a reasonable decision about family planning (Hatcher et al., 1978, p. 145).

Legal standards for informed consent are no longer dependent on local community guidelines, but are based on a standardized series of guidelines which provide for the following:

1. A fair explanation of the procedures to be followed (proposed method);

2. A description of the attendant discomforts and risks [including all (life threatening) risks, and all common minor risks];

3. A description of the benefits to be expected;

4. An explanation concerning appropriate alternative methods of family planning and explanation of the effectiveness rates with indication that nothing is 100 percent;

5. An offer to answer any inquiries concerning the procedures;

6. The documentation referred to in this section shall be provided by one of the following methods:

   (i) Provision of a written consent document detailing all of the basic elements of informed consent.

   (ii) Provision of a short form written consent document indicating that the basic elements of informed consent have been presented orally to the patient (Hatcher et al., 1978, p. 146).

This document must be signed by the patient as well as by a witness. The importance of this process is documented by the fact that most teens who reported to family planning clinics did not have information about birth control upon arrival (Reichelt and Werley, 1975). Signing of the consent form should be the last step of an educational process (Paul and Scofield, 1979).

Problems of Adolescent Pregnancy

Teenage childbearing is associated with a number of severe problems and consequences for these young mothers and their infants. Teenaged mothers experience medical risks and social problems associated with births at a young age.

Among teenagers, pregnancy is initially a crisis to the man and woman involved. LaBarre (1968), Furstenberg (1969) and Wilson (1973) reported that two-thirds of the pregnant girls interviewed were "shocked" and "extremely upset" when they first learned of the pregnancies, but later were able to adjust to the circumstances (Furstenberg, 1976).

The decision of an adolescent to carry a pregnancy to term may involve the expectant mother, her male partner, her unborn child, and frequently her parents (Smith, 1975). Often in the decision-making process, the woman was given the greatest amount of attention; the involved male has felt a "heroic" need to marry his sexual partner as a solution to the problem (Wolfish, 1973; Juhasz, 1974).

However, teenaged marriages frequently are complicated by premarital conceptions. One-third to one-half of all teenage marriages have premarital conceptions. When life careers are interrupted by pregnancy and marriage, young people are compelled to respond to the conflicting demands of school, parenthood, and marriage. Marriages subjected to these stresses are most likely to last if the couple had a long-standing commitment to one another before the pregnancy. Marriages involving women over 20 have greater stability than those in which the women were under 20 years of age (LaBarre, 1968; Guttmacher Institute, 1976).

In the decades of the 1960's and 1970's, approximately one out of two marriages of adolescents with premaritally conceived children ended in divorce (LaBarre, 1968; Guttmacher Institute, 1976). Lorenzi et al. (1977) found that in 75% of the young mothers who expected to eventually marry the father of their children did not. When young women did marry the father of the child, relationships were not stable. Lorenzi has recommended that adolescent mothers should be encouraged not to marry within the two-year period following their pregnancies. In general, marriage caused the situation of adolescent mothers to be worse rather than better, unless the marriage had a solid psychological, financial, and social basis (Chilman, 1978).

Having borne a child out-of-wedlock does not prevent adolescent women from marrying at a later time. Chances for marriage were greatest if the woman married the father of the child. Having borne two or more children out-of-wedlock, however, has seriously affected young women's chances for marriage (Chilman, 1978).

Teenage childbearing has adversely affected educational and occupational opportunities of teenage parents who have acquired less education and less prestigious jobs than their counterparts without children. The effects of pregnancy appear to have been more severe for women than for men. Pregnancy has been the major cause of school dropout for teenage women (Howard, 1971). Furthermore, those women have not caught up educationally and have been confined to occupations that offered little or no potential (Brunswick, 1971; Furstenberg, 1976; Moore and Waite, 1977; Card and Wise, 1978). One-third of the young urban women in Presser's (1974) sample expressed regret at the timing of the birth of their first child. The reason most commonly reported by these women was that their life choices had become much more restricted than anticipated.

Women who were employed prior to their pregnancies were more likely to be employed after their children were born (Presser, 1974). The older a woman was at the time of her pregnancy, the greater the likelihood was that she would be employed afterward (Bowerman, Irish, and Pope, 1965; Presser, 1974; Furstenberg, 1976).

Several studies have suggested that there are serious medical risks to pregnant adolescents (Sarrel and Klerman, 1969; Osofsky, Osofsky, Kendall, and Rajan, 1973; Jekel, Harrison, Bancroft, Tyler, and Klerman, 1975). Among young adolescents, pregnancy has been associated with high incidences of toxemia, anemia, contracted pelvis, prolonged labor as well as other problems related to labor and delivery. These problems were more severe among girls from low-income families who did not receive early parental care. The medical risks to adolescents under 14 years of age were very high even when good parental care was provided.

Young adolescent women are cited frequently as high risk candidates with respect to giving birth to immature/premature (low birth weight) infants. This risk declines with good premarital care and adequate preparation for labor and delivery (Sarrel and Klerman, 1969). Teenagers from low income groups who neither sought early prenatal care nor received a balanced diet prior to or after the onset of pregnancy, are cited as the greatest risks.

Risks of prematurity and perinatal mortality have increased significantly when the mother has two or three pregnancies during her teen years (Jekel et al., 1975). These increased risks appears to result from an interaction of age and parity. Teenagers who have given birth to several children have had short intervals between pregnancies. Mothers under 20 years of age probably do not have sufficient time for physiological and nutritional preparation of their bodies. By contrast, women in their 20's experiencing second deliveries have significantly lower rates of prematurity and perinatal death than under aged-20 group.

Developmental problems of children born to adolescent mothers have been numerous. Osofsky et al. (1973) reported reduced birth weights of babies born to adolescent mothers as well as a succession of deficiencies related to overall growth and development. At one

month of age, these infants ranked below the 50th percentile in weight and the 76th percentile in length. By three months ratings improved, approaching normal levels by six months of age. However, this trend began to reverse itself by nine months of age and clearly had reversed by one year of age, when 61 percent of the infants were below the 50th percentile in weight and height.

Adjustment to motherhood has varied among groups of adolescent mothers. Furstenberg's (1976) group of low-income blacks appeared to adjust well to their children even with a minimum amount of support from the putative father. The reason undoubtedly was due to the high frequency of broken homes among low-income blacks; women are accustomed to and prepared for rearing children without a father. Chilman (1978) reported that approximately 15% of black and white unwed mothers had adjustment problems during the first year of motherhood and that those problems continued on a long-term basis. In assessing mother-child interactions of adolescent mothers and their babies, Osofsky et al. (1973) determined that the quality of the verbal interaction needed to change.

Factors Influencing Adolescent Pregnancy

The factors that influence adolescent pregnancy are complex. The task of isolating these variables is compounded by the multivariate nature of the issue and the penchant of researchers to seek single, underlying causes of pregnancy. As Chilman reminds us,

> ...societies and people are complex and their functioning and behaviors are an outcome of a host of interacting variables. Moreover, there are large differences within nations, societies, and populations that affect the occurrence of premarital intercourse, the use of contraceptives and abortions, the likelihood of marriage following a premarital pregnancy and the reporting of illegitimacy (1978, p. 208-209).

Existing research factors influencing adolescent pregnancy can be examined in three broad categories: physiological, sociological, and psychological.

The most significant physiological cause of adolescent pregnancy is the drop in the mean age of menarche, with a concomitant drop in the length of the period of teenage sterility in women. Cutright (1972) conducted a study that reported the age of menarche dropped by two years (16.5 to 14.5) from 1870 to 1930. Between 1950 and 1970, the age of menarche dropped from 13.5 years to a predicted mean age of 11.5 years. Improved nutrition and health among preadolescent girls have been acknowledged as the major factors contributing to the lowered age of menarche. It has also been hypothesized that the mean period of teenage sterility, which possibly has declined from 3 to 2.5 years, is related to the decline in the age of menarche. However, this has not been substantiated. Thus, the age at which girls

are fully fecund is decreasing; without an increase in premarital coitus, this phenomenon could account for a significant increase in illegitimate births by girls betwen 15 and 17 years of age.

Improved health and nutritional status also has accounted for a decrease in the rate of fetal loss by unwed adolescent girls, particuarly young nonwhite girls. This, too, accounts for increases in birth rates among adolescent women.

One interesting sociological hypothesis suggests that the incidence of adolescent pregnancy is more prevalent in permissive cultures or societies and significantly less prevalent in more restrictive cultures. Christensen (1958) and Cutright (1971) have investigated this with inconclusive results. Billingsley (1970), who views the black culture as more permissive in accepting illegitimate children among preadolescent girls, has concluded that the hypothesis is confirmed in selected cultural and racial groups. Others (Schulz, 1969; Rainwater, 1970; and Ladner, 1971) strongly disagree, arguing that adolescent pregnancy is seen as an unfortunate but often inevitable event among black women. They urge examination of other specific cultural influences, such as family support.

A second frequently espoused cause of adolescent pregnancy is that welfare programs support unwed mothers and dependents and are incentives for early motherhood. Cutright (1971), Presser (1974), Ross and Sawhill (1975), and Moore and Caldwell (1977), have investigated this phenomenon with similar results. Despite popular stereotypes to the contrary, no evidence was found to show that welfare benefits, regardless of size, serve as an economic incentive to childbearing outside of marriage. An important related finding was that the availability of welfare benefits did influence decisions whether the child would remain with the mother or be placed for adoption or whether the couple married or remained single.

A third hypothesis associated with sociological causes of adolescent pregnancy suggests that a relationship exists between poverty (or socioeconomic status) and adolescent pregnancy. Researchers tested the popular belief that poorer families tended to yield more births among adolescents than families of higher socioeconomic status. Studies by Vincent, Haney, and Cochrane (1969), Moore and Caldwell (1976), and data compiled from HEW (1975) have provided only limited support for this belief. Researchers have encountered difficulty in evaluating the effects of poverty as a cause or consequence of adolescent pregnancy. Many hypothesized that teenaged childbearing may cause reduced family income and force unwed mothers to move into low-income neighborhoods. Moore and Caldwell (1977) noted the highest rates of illegitimacy among older black teenagers and youths born in ghettos to parents who had less than college educations; but poverty, race or education separately did not cause inflated rates of illegitimacy.

This relationship was studied more specifically among indigent adolescent girls (Goldfarb, Mumford, Schum, Smith, Flowers, and Schum, 1977). Within this group they found significant economic predictors of pregnancy:

> An indigent teenager who comes from a large family, has received sex education late and from an acquaintance, and whose academic performance is poor or disrupted, would seem to any counselor a likely candidate for an unplanned pregnancy. What is surprising is the magnitude of the observed differences between extremes. The likelihood of an unplanned pregnancy for such a girl is thousands of times greater than the likelihood for an indigent teenager who comes from a small family, has attained normal grade level, and has received her first sex education early and at home (Goldfarb et al., 1977, p. 137).

Poverty alone is too broad a category upon which to predict adolescent pregnancy. However, the interactive effects of poverty and educational variables were found to be significant predictors of pregnancy.

Researchers, such as Cutright (1972), Presser (1974), Ross and Sawhill (1975), and Furstenberg (1976), have charged that poor employment opportunities are one important cause of unmarried adolescent pregnancy. Lack of available job opportunities reportedly has deterred marriage at an early age. However, motivation not to have children has not been reduced by the availability of alternative roles through jobs. As such, perception of employment opportunity can be viewed as a factor that influences but is hardly a prime basis of the decision to have or not to have a child.

A popular hypothesis advanced to explain adolescent pregnancy compared the preparation for female roles through the mother-daughter relationship and the adolescent's marital status, timing, and number of pregnancies. Presser (1974) investigated this hypothesis with young New York City mothers but found no support. Other researchers, however, have noted a slight relationship between mothers who had children as adolescents and the tendency of daughters to do the same (Chilman, 1978).

Another popular belief suggests that blacks are more likely than whites to engage in sexual activity at an early age, get pregnant, and have an abortion. Zelnik and Kantner (1972) found that black adolescents were twice as likely as whites to have premarital intercourse, and were significantly more likely to begin sexual activities at earlier ages. They also reported that blacks were half as likely to use contraceptives and one-third as likely to get an abortion as their white counterparts. However, Zelnik and Kantner, and other researchers, have been cautious in attributing adolescent pregnancy to a racial phenomenon.

The psychological theories advanced to explain adolescent pregnancy are the most persuasive in terms of their application to programs being developed to prevent pregnancy. One hypothesis suggests that unmarried adolescents who become pregnant are in some way psychologically deficient or inadequate. Vincent (1961), Pope

(1967), and Parker (cited by Moore and Caldwell, 1977) have investigated the differences between groups of adolescent females who became mothers and those who did not. In each study, few differences were noted between the groups. Parker, who interviewed ninth grade Minnesota girls with the Minnesota Multiphasic Personality Inventory, revealed that those who became pregnant tended to be slightly more energetic, less likely to conform, more outgoing, and more socially active than those who did not conceive. He also noted that girls who became pregnant tended to score slightly lower on intelligence tests than their counterparts. He reported, however, that the two groups were far more alike than different.

Pope (1967), looking at a different group of older mothers and equivalent non-mothers, found that women who became pregnant had stable, loving relationships with their sexual partners, hoped to marry them, shared friends in common, and knew their families. In short, their behaviors matched those of others in their socioeconomic group, differing only in that they became pregnant. Clearly, there is very little support for the idea that adolescent pregnancy is a result of promiscuity (Furstenberg, 1969).

A second psychological cause related to adolescent pregnancy is that of educational attainment. As had been suggested in Parker's findings (cited by Moore and Caldwell, 1977), adolescents who became pregnant may be less intelligent or less mature in their intellectual development than those who don't become pregnant.

In a clinical study involving 13 unwed pregnant adolescents, Hatcher (1973) found the experience of pregnancy to be stage-specific for early, middle, and late adolescents. The early adolescents (aged 12-15) lacked knowledge about contraception and conception and tended to deny that they were pregnant. Anticipation of motherhood was not a joyous event for these adolescents. The middle adolescent (aged 15-18) appeared to have adequate information related to conception and knew that pregnancy could have been avoided. However, they failed to protect themselves against the risk of pregnancy and blamed others for their situation. Authority figures such as the doctor, boyfriend, and even father were typical targets for externalization of guilt. Interestingly, these women romanticized sexuality, indicating that the use of contraception would have "cheapened" the whole experience. Adolescents at this stage of development exhibited mixed emotions in anticipation of motherhood, dreading it one time and romanticizing it another. Expectant mothers in late adolescence (over 19 years of age) were able to personally accept the responsibility for their pregnancies. They had previous knowledge of conception and were able to acknowledge their own contraceptive failures. Still, they unconsciously blamed their parents for failing to provide adequate sex education while openly admitting that their pregnancies were being used to evoke marital commitments from their boyfriends. Older adolescents had very positive feelings associated with the anticipation of motherhood.

Interestingly, Hatcher found that adolescent behaviors concerning premarital pregnancy are strongly affected by the stages of their cognitive development (although the small sample restricts generalization). Adolescents differ in their abilities to receive, retain, and use knowledge related to pregnancy and its prevention. Work by Kohlberg (1969) and Piaget et al. (1969) have indicated that teenagers, however similar their socioeconomic status, family training, physiological impulses, or race, differ remarkably in their individual rates of cognitive and moral development. Such growth clearly affects their knowledge base and decision-making apparatus with respect to sexual activity, but relatively little research has focused on this factor.

One-fourth of the pregnant adolescents in Furstenberg's (1976) study stated that they had not thought about the possibility that they might become pregnant before having intercourse. Most girls in the same sample were unable to define birth control or identify specific methods of birth control. Many who were familiar with birth control had acquired this information after becoming pregnant.

Theories Related to Adolescent Development

The Group for the Advancement of Psychiatry (1968) has defined puberty and adolescence in related but different terms. Puberty is viewed as a pan-human biological growth spurt occurring between ages 10 and 15 and resulting in procreative capacity. Adolesence, on the other hand, is seen as the psychological and sociological response to puberty, both in terms of the individual youngster and her cultural environment.

Such a distinction separates the biological aspects of sexual development from the psychosocial arena in which decisions are made and attitudes are formed. Evidence confirms that biological patterns with respect to sexual maturity are much more stable across cultures than are psychosocial behaviors during the period (Ford and Beach, 1951). Adolescence must then be understood through careful study of the child's cognitive social development.

Piaget's theory (Patterson, 1974) postulates that the stage of concrete operations ranges from 7 to 11 years of age while the stage of formal operations commences between 11 and 15 years of age. In the period of concrete operations, the child forms an organized and integrated cognitive system to structure and manipulate his world. During this period the child grows in ability to generate mental imagery, make moral judgments, and develop a set of values. Nevertheless, cognitive operations are limited by the following:

1. They are concrete and present-bound dealing with things and events in the immediate environment;

2. The concrete focus restricts generalization so that related concepts are mastered in isolation; and

3. The child's operational systems seem to represent single apparati and have not been combined into an integrated system so that the child may solve multivariate problems (Patterson, 1977, p. 98).

Specifically in the period of concrete operations the child is concerned with classifying, categorizing, and ordering ideas, events, and objects with which she is daily confronted, is egocentric, irreversible and marginally adaptable.

Moving into a period of formal operations, the child sheds the previous limitation in her cognitive operations. She then has the ability to consider both the "real" and the "impossible." Piaget viewed formal thought as emerging from:

1. Reality that becomes subordinate to possibility,

2. The hypothetico-deduction method, and

3. Propositional logic based on second order operations (Piaget and Inhelder, 1969, pp. 250-255).

With the first characteristic the child moves to generate hypotheses within her environment as to how things might be. It enables her to look at relations among ideas, and to work with proportions, correlations and probability. Thought increasingly is less bound by reality, becomes abstract and may proceed in the absence of the data of reality.

The second characteristic of formal operations in adolescents is the hypothetico-deductive method. Inhelder and Piaget (1958) believed that in this mode the child may generate conclusions which are rigorously deduced from premises whose truth status is regarded as hypothetical at first and only validated later. As such, this line of thinking reverses a previous pattern, where now the child is able to reason from what is real to what is possible.

The third characteristic of formal operations is second-order operations. In this setting the person who has attained formal operations has what Ausubel described as "the ability verbally to manipulate relationships between ideas (second-order relations) in the absence of recently, prior, or concurrently available concrete-empirical props (Ausubel and Ausubel, 1966, p. 405).

Intellectually limited young adolescents were viewed as being unlikely to grasp the future significance of giving birth to a child in their teen years either within or outside marriage. Young adolescents were shown to rarely function in cost-benefit terms and to rely on impulse in their behavior.

A different pattern has been noted among older adolescents. They are more able to transcend the sheer particularity of an act, to place behavior within the web of circumstance by expanding and commanding time (Adelson, 1975).

With respect to the preceding discussion, Piaget's work on the cognitive behavior of adolescents--especially when linked to decisions of pregnancy--have far reaching implications psychologically beyond cognitive structuring. More specifically pregnancy prevention decisions clearly relate to theories of moral development studies (Kohlberg) and self-concept or identity formation (Erikson).

Kohlberg's studies (1969, 1970, 1973) in moral development appear to have a natural kinship to the problem of pregnancy prevention among adolescents. Not only does Kohlberg's theory involve the same kind of developmental stage assumptions associated with the work of Piaget, but pregnancy prevention as an issue for preadolescents and adolescents raises clear challenges to moral reasoning and induces differing responses by the developmental level attained by an individual.

Kohlberg has demonstrated that moral reasoning is clearly organized in a stage theory. Several characteristics of these stages are:

1. They are qualitatively different modes of thought rather than increased knowledge of, or internalization of, adult moral beliefs and standards;

2. They are invariant, in order or sequence of development... Movement is always forward and always step-by-step;

3. They form a clustered whole: there is a general factor of moral stage cross-cutting all dilemmas, verbal or behavioral, with which an individual is confronted;

4. They are hierarchical integrations; subjects comprehend all stages below their own and not more than one above their own; they prefer the highest stage they comprehend (Kohlberg and Turiel, 1974, p. 186).

Kohlberg believes his research supports the existence of at least six discrete stages of moral reasoning. Reworking a discussion of Kohlberg's work (1973), Kastenbaum developed the following representation of the stages of moral reasoning (Table 35).

According to the research of Kohlberg, the formal operation stages of moral development begin about age 12 with Stage Three. This stage of interpersonal mutuality may involve a sexual favor in order to receive a response in kind. This is in contrast to prior stages which may have involved reasoning in sexual matters akin to "If it feels good, do it!" or "You're wrong only if you get caught."

Kohlberg (1964) reported by Chilman (1978) speculated it is relatively unlikely that adolescents or adults move to Stage Six, which requires a search for firm principles which may be upheld in the face of societal pressure to the contrary. Kohlberg and Gilligan (1977) speculated that the moral upheaval in society generally, plus the ephemeral half-answers provided by the counter culture contributed little to the attainment of high level moral principles.

Table 35

STAGES OF MORAL REASONING

Stage 0 - No Morality Orientation - "What I Want"

The child does one thing or another because he or she "wants to." There is no distinction between what is desirable and what is "right" or "wrong" in the moral sense.

Stage 1 - Punishment-Obedience Orientation - "What Pleases Mom and Dad"

It is what a powerful, prestigious authority says that makes something either right or wrong. The child obeys without question to avoid punishment.

Stage 2 - Instrumental Hedonism and Concrete Reciprocity--"What Makes You and Me Happy?"

Decisions are made on the basis of practical considerations. The right thing is what benefits oneself and perhaps others (instrumental hedonism: doing something to bring pleasure). "I'll do something nice for you if you will do something nice for me" (concrete reciprocity) is also characteristic at this time. The absolute power of an authority no longer dominates.

Stage 3 - Orientation to Interpersonal Relations of Mutuality--"Being Good to Others"

This was first known as the "good-boy" stage of moral development. The motives and intentions are regarded as crucial to the morality of an action. It is not just what a person does, it is also why he or she does it. The child is "good" in order to help others and to gain social approval. There is satisfaction in being a "good person" apart from specific, concrete actions.

Stage 4 - Maintenance of Social Order, Fixed Rules, and Authority--"Obeying the Law"

The basic sense of morality at this time is drawn from the laws of the land and from the existing social order in general. The child at this time sees goodness in terms of being a law-abiding citizen and group member. The laws and regulations of the social order itself are not questioned; whoever upholds law and order must be good.

Step 5 - Social Contract Perspective--"Obeying the Right Laws"

This stage is divided into two substages: first, the individual recognizes that there is something arbitrary in the rules and expectations of social order. Laws still should be obeyed because they comprise a social contract, an arrangement tolerated in order to live harmoniously together. Secondly, however, some laws are better than others and one can advocate revising laws through due process. The sense of laws being relative to particular groups with morality as such being something that goes beyond simple obedience to established laws is a shift that continues within Stage 5.

Stage 6 - Universal Ethical Principle Orientation--"Obeying My Conscience"

The individual's conscience becomes critical here. There is an increased sense of personal moral responsibility: "I must do what I feel deeply to be right, based upon all I understand about life." Moral decision-making at this stage may lead either to conventional or unconventional judgments from the social-group standpoint. This is a more inner-directed moral sense, as contrasted with the socially-directed moral sense of Stage 5.

Stage 7 - Contemplative Nonegoistic Experience (hypothetical)--"What Is the Meaning of Life"

The possibility that a stage of this type exists was suggested by kohlbert (1973) on the basis of philosophical and biographical information compiled through the centuries, rather than on the basis of controlled research. In this stage, the question, "Why be moral?" is confronted, and the answer is given by each individual according to his or her understanding of life and death. It represents a movement away from the individual self, just as the previous progression of stages represented a movement away from external authority and group regulation.

Kastenbaum, R. Humans developing: A lifespan perspective. Boston: Allyn and Bacon, 1979, pp. 359-360.

Kohlberg's research indicated that the more advanced stages of moral development required the type of logical thinking associated with formal operations.

Erik Erikson's theory may account for some of the cultural and psychosocial influences on adolescent behavior. Erikson considers the formation of an individual's sense of identity as the central task for adolescents. Adolescents respond to the universal need to see oneself as an individual separated from others but attached to many of the shared values and interests of others.

Like Kohlberg and Piaget, Erikson (1950, 1963) postulated a developmental stage theory. The stages are listed in a table below (Table 36).

Table 36

DEVELOPMENTAL STAGE THEORY

STAGE	APPROXIMATE AGE	THE DEVELOPMENTAL CHALLENGE AT THIS TIME
1	Birth to 18 months	A sense of trust vs. a sense of mistrust
2	18 months to 3 years	A sense of autonomy vs. a sense of shame, doubt
3	3 to 6 years	A sense of initiative vs. a sense of guilt
4	6 to 12 years	A sense of industry vs. a sense of inferiority
5	12 to 18 years	A sense of identity vs. a sense of identity confusion
6	18 to 35 years	A sense of intimacy vs. a sense of isolation
7	35 to retirement	A sense of generativity vs. a sense of self absorption
8	Old Age	A sense of integrity vs. a sense of despair

Kastenbaum, R. Humans developing: A lifespan perspective. Boston: Allyn and Bacon, 1979, p. 339.

The table illustrates Erikson's interpretation of the adolescent quest for personal identity. This quest must be interpreted within her overall framework of human development. Erikson views the adolescent as a person who has already passed through four previous stages marked by a central challenge, crisis, or task.

The adolescent, according to Erikson, has a compelling need to establish a tentative identity that integrates her sense of childhood identity with her anticipations for adulthood. This complex task may not be adequately resolved as one leaves adolesence and passes into adulthood. Indeed, recent speculation by Manaster (1977) and findings by Douvan and Adelson (1966) and Offer and Offer (1969) raised questions as to whether a real crisis exists or whether adolescents actually are concerned with intensive identity-seeking so early in their development.

Erikson responded by reiterating a concept more fully discussed by Opler (1971), suggesting that identity formation was made difficult by an expanded concept of adolescence reaching into the twenties wherein the young adult is held in limbo without access to adult-sanctioned rights and responsibilities. Both of the above theorists charge that identity integration is then slowed and markedly influenced by the force of the adolescent subculture.

The search for identity has involved examination of both homosexual and heterosexual attachments. Erikson (1963) believes that "first love" affairs of the heart have less to do with simple sexual ripening and experimentation and more to do with identity formation, mutual identification, and person validation.

Erikson favors, with some logical support, the full utilization of a "psychosocial moratorium" during which an adolescent has time to make useful personal experiments without being pressed into definitive commitments.

Although Erikson has forced the reexamination of human development in light of the impact of the cultural milieu, certain observers, notably Marvin Opler (1971), have suggested that Erikson has not gone far enough. Rather than rely upon physiological, cognitive, or psychosocial determinents of adolescent behavior, Opler views the nature of society as having a decisive influence on what kind of person the adolescent becomes.

Opler makes a strong departure from developmentalists who regard the child's psychosocial characteristics as emerging from physiological processes. Relating this to sex, one would have to assume that psychosexual stages of development bear a linear relationship with the individual's physiological status and his or her psychic need, motives, conflicts and capacities. Based on this assumption, the influence of culture is visible only after the physiological-psychological basics have appeared.

For Opler, the remarkable differences in adolescent character noted by anthropologists around the world are supportive evidence for his theory in this way: "The variability about the nature of adolescence around the world does not reveal one single healthy or one single form of disturbed reaction to the relatively fixed and simple set of physiological changes (Opler, 1971, p. 153)."

Opler argues that the world of the adolescent is the "metropolitan youth culture." This culture is the creation of technologically oriented western cultures that keep youth in a state of enforced limbo for 6 to 8 years before the social, economic, and sexual gratifications of adult society may be enjoyed. Opler suggests that adolescents have created a youth culture which provides the guidance, support, and recognition denied them by the main cultural milieu.

Opler believes other views of development have neglected the fundamental power of social structure to influence behavior and development. He charges that the creation of the youth culture represent the adolescent's attempt to defend against the frustrating and oppressive weight of mass culture.

Conclusion

Cobliner (1974), in a well-controlled study of pregnant and sexually active adolescents, found three factors contributing to unintended pregnancy: (1) misinformation about physiology and contraception, or belief without knowledge, (2) skepticism about information, or knowledge without belief, (3) risktaking, or having unprotected coitus with the belief that pregnancy would not occur. He concluded that pregnancy prevention education must deal with knowledge, valuation, and action.

Similarly, in describing the needs for pregnancy prevention programs, Schinke et al. (1979) described a critical four step process:

1. Adolescents need access to relevant information;
2. Adolescents must perceive, comprehend, and store the information accurately;
3. Adolescents must personalize and use the information in making personal decisions;
4. Adolescents need behavioral skills to implement these decisions in social situations.

The review of literature provides a background for teachers or group leaders facilitating this learning process.

APPENDIX B

DOCUMENTATION OF CONTENT VALIDITY FOR ITEMS

DOCUMENTATION OF CONTENT VALIDITY FOR ITEMS*

Developmental Task:

Building Wholesome Attitudes Toward Onself as a Growing Organism.

Goal:

To acquire and manage a wholesome set of attitudes and behaviors about sex.

Theme:

Changing Bodies and Medical Concerns.

22. Describe ways in which male and female bodies change during adolescence.

    Puberty is a necessary precondition for sexual intercourse (Maddock, 1973). Acceptance of sexuality is an important factor in adolescent contraceptive behavior (Goldsmith, 1972). Adolescents feel biological and emotional conflicts (Carter, 1970; Juhasz, 1972; Gadpaille, 1975).

40. Explain how hormones affect growth and development during adolescence.

    Changes of puberty are preconditions of sexual intercourse (Maddock, 1973). Adolescents feel biological and emotional conflicts (Carter, 1970; Juhasz, 1972; Gadpaille, 1975).

68. Discuss concerns that adolescents have about their changing bodies.

    Puberty is a necessary precondition for sexual intercourse (Maddock, 1973). Acceptance of one's own sexuality is an important factor in contraceptive behavior (Gadpaille, 1972; Goldsmith, 1972; Juhasz, 1972; Zelnick and Kantner, 1977).

47. State functions of each of the major parts of the female reproductive system.

    Lack of correct and accurate information about reproductive physiology contributes to adolescent pregnancy (Kirkendall, 1967; Carter, 1970; Youngs and Niebyl, 1975; Goldfarb et al., 1977; Moore and Caldwell, 1977). Adolescents in the stage of concrete operations need specific identification of concepts (Patterson, 1977; Conger, 1977).

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*Items are numbered according to placement on Needs Assessment Inventory for Teenage Pregnancy Prevention.

37. Explain the difference among three phases of the menstrual cycle, indicating when conception is most likely to occur.

Many adolescents do not know when in the menstrual cycle ovulation is most likely to occur (Osofsky, 1970; Presser, 1974; Cvetkovich et al., 1975; Goldfarb et al., 1977; Moore and Caldwell, 1977; Zelnick and Kantner, 1977). Adolescents tend to overestimate the "safe" times during the menstrual cycle (Page et al., 1975).

1. State signs of pregnancy in the female.

Young people are interested in fundamental concepts related to pregnancy (Rubenstein et al., 1976; Rossner, 1977). Ignorance related to physiology and contraception contribute to adolescent pregnancy (Youngs and Niebyl, 1975). A program related to the biology of sex is the best means of preventing pregnancy (Goldfarb et al., 1977).

26. Compare male and female reproductive systems.

Ignorance related to physiology and contraception contribute to adolescent pregnancy (Youngs and Niebyl, 1975). Understanding male and female reproductive systems is a necessary prerequisite to understanding the male and female methods of birth control (Hatcher et al., 1973). Learners at concrete operations need specific concept identification (Patterson, 1977; Conger, 1977).

57. Recognize male and female similarities in stages of sexual excitement.

Male and female reproductive organs originate from the same primordial tissues (Money and Ehrhadt, 1972). Sexual response in males and females is remarkably similar with major differences being a result of socialization (Masters and Johnson, 1966, 1969; Kaplan, 1974).

28. Describe ways in which sexual feelings may be expressed.

Sexual feelings may be expressed in a variety of ways (Kinsey, 1948, 1953; Masters and Johnson, 1966, 1969), several of which do not result in procreation (Bernard, 1966).

4. Explain how each of the methods of birth control is used and how effective each is.

The most significant predictor of adolescent pregnancy is unprotected coitus in the previous month (Zelnik and Kantner, 1977). Teenagers frequently have intercourse without using birth control (Martinson, 1968; Hatcher, 1973; Sorensen, 1973; Cvetkovich et al., 1977). Adolescent beliefs associated with contraceptives and fertility clearly lack a basis in reality (Arnold, 1974).

61. Explain the advantages and disadvantages of each method of birth control.

Ineffective contraceptive use is associated with lack of adequate information related to ways contraceptives are used (Martinson, 1968; Hatcher, 1973; Sorensen, 1973; Cvetkovich et al., 1975; Youngs and Niebyl, 1975; Hertz, 1977). Adolescents would use birth control with the assurance that methods were safe (Furstenberg, 1969). Girls and methods must be matched according to personal needs (Lane, 1973, 1975).

59. Classify those contraceptives which are used by the female and those which are used by the male.

Young adolescents tend to use male methods of contraception (Hatcher, 1973; Presser, 1974). First methods of contraception used by couples are typically male methods, the condom and withdrawal (Zelnik and Kantner, 1977). These methods of contraception are generally less effective than some of the female methods of contraception and seem to be used less responsibly (Wolfish, 1973; Presser, 1974). A great percentage of contraceptive behavior depends on males' perception of using contraception and on willingness to assume that responsibility (Wolfish, 1973).

82. Identify places where safe and effective contraceptives can be obtained.

Perhaps one of the most important components of a pregnancy prevention program is identification of sources of effective methods of birth control (Goldsmith et al., 1972). Location of clinics makes it difficult for young women in suburban areas to get to clinics (Dryfoos and Heisler, 1978). Young people are frequently able to list only one source for obtaining contraceptives (Zelnik and Kantner, 1973). The lack of accessibility has been a stumbling block to adolescents in the use of birth control (Shah, Zelnik and Kantner, 1975).

65. State the methods of birth control that require a doctor's prescription.

Young adolescents have a tendency to use male methods of birth control (Hatcher, 1973; Presser, 1974) with frequent result of pregnancy (Presser, 1974). Women who use medically prescribed methods of birth control are more consistent contraceptive users (Zelnik and Kantner, 1977) and are using highly reliable methods (Hatcher et al., 1978).

46. Explain the importance of a medical examination in obtaining some methods of birth control.

Medically prescribed methods of birth control are generally the most effective ones for women (Hatcher et al., 1978). Contraceptive use involves risks; thus, medical examination is necessary for long-term health care (Rauh et al., 1975). Consistent contraceptive use among women is significantly related to use of medical methods (Zelnik and Kantner, 1977). In addition, high incidences of disease have been found among ostensibly healthy teenagers (Fielder et al., 1973).

31. Describe a medical examination required for obtaining methods of birth control.

Comprehensive medical care with periodic check-ups insures the greatest safety in the use of medically prescribed methods of birth control (Rank et al., 1975; Hatcher et al., 1978). Fear of birth control is an excuse among adolescents for not using contraception (Shah, Zelnik, and Kantner, 1975).

17. State causes, symptoms, cures, and ways of preventing each of the venereal diseases.

Adolescents would welcome more information related to venereal disease (Potter and Smith, 1976; Rubenstein et al, 1976). Venereal diseases and often transmitted with intimate sexual contact and have the potential for long-term morbidity (Stern and MacKenzie, 1975).

70. Explain reasons why people fail to have venereal diseases treated by a doctor.

Adolescents would welcome more information related to venereal diseases (Potter and Smith, 1976; Rubenstein et al., 1976). Intimate nature of sexual contact as a means of transmission of disease discourages young people from treating the disease (Stern and MacKenzie, 1975). Negative connotations of the diseases prevent effective treatment (Yarber, 1978).

11. Explain the effects of failing to treat venereal diseases.

Adolescents would welcome more information on venereal diseases (Potter and Smith, 1976; Rubenstein et al., 1976). Intimate sexual contact as a means of transmission does not encourage reporting of disease. Failure to report and treat venereal disease results in long-term morbidity (Stern and MacKenzie, 1975).

Developmental Task:

Developing Conscience, Morality, and a Scale of Values.

Goal:

To develop a set of values that enables deliberate decision-making with full understanding of alternatives and consequences in social and sexual situations.

Theme:

Values Clarification.

73. Explain ways in which sexual feelings fit into lifestyles.

    Sexual response in human beings is a natural physiological response that is believed to be very similar between sexes and cross-culturally (Ford and Beach, 1951; Masters and Johnson, 1966; Kaplan, 1974). There is a clear lack of consensus related to the meaning of sexuality, particularly as procreative and nonprocreative sexuality can be separated (Bernard, 1966). The traditional assumption has been that the appropriate outlet for sexual intercourse is marriage (Broderick, 1966; Maddock, 1973). This assumption is being questioned by young people (Sorensen, 1973).

54. Discuss the meaning of kissing, petting, and intercourse for boys and girls.

    There is a clear lack of consensus related to the meaning of sexuality (Bernard, 1966; Gebhard, 1969; Maddock, 1973) with a need for adolescents to determine personal meanings of sexuality (Schinke and Gilchrist, 1977; Schinke et al., 1979).

34. Explain why people sometimes feel guilty about their sexual feelings.

    A culture that is restrictive in its outlook (Bernard, 1966) on sexual behavior tends to produce people that feel guilty about sexual feelings (Masters and Johnson, 1969; Kaplan, 1974; Money and Tucker, 1975).

3. Describe ways in which the double standard operates in male-female relationships.

    Standards related to male and female sexual behavior are in a state of flux (Reiss, 1964, 1965, 1976; Bell and Chaskes, 1970; Christensen and Gregg, 1970; Hunt, 1974). Males are supported for sexual adventuresomeness, while females are not. Thus, the female cannot plan to be protected during coitus (Scales, 1977).

30. Share and discuss moral values with parents, clergy, teachers, and friends.

"In all sexual encounters, commitment to humane and humanistic values should be present" (Humanist, 1976, p. 4). Education related to sexuality must be personalized to be effective (Cvetkovich, 1975; Schinke and Gilchrist, 1977). Youth and parents both are in the process of evolving moral values related to sexuality (Becwar, 1972; Maddock, 1973; Mackey and Milloy, 1974). Adolescents clearly want guidance from parents and the church (Martinson, 1968).

81. Identify personality characteristics that are important in friends, dates and marriage partners.

The sequence of friendships, dating relationships and marriage is quite typical in this culture (Broderick, 1969; Vener and Stewart, 1974) and is desired by many adolescents despite questioning of traditional patterns (Sorensen, 1973). The dating code prescribes the kinds of boy-girl relationships that are permissible in the adolescent culture (Poveda, 1972).

36. Discuss personal values that result in appropriate behavior in dating situations.

Adolescent values are expressed in dating relationships. There is a clear need to help adolescents articulate personal values (Maddock, 1973). Norms related to adolescent dating are generated by the peer group. The adolescent peer group generally supports sexual activity among partners who have affection for one another (Miller, 1973; Poole, 1976). Effective contraceptive use is related to consistency of value choices in sexual decision-making (Reiss et al., 1975).

71. Explain reasons why some teenagers become pregnant.

Values of the individual determine the use to which information (such as that related to changing bodies and medical concerns) is put (Kirkendall, 1966; Cobliner, 1974; Schinke and Gilchrist, 1977).

5. List things most liked and disliked about taking care of babies and toddlers.

"A value is a characteristic or attribute of some general realm of human experience which is considered desirable by an individual or group" (Dalis and Strasser, 1974, p. 2). Children are born as a result of several choices made by individuals (Juhasz, 1975). The decision to have a child should be consistent with realistic values related to children. A high proportion of the children born to

adolescent mothers are unintended as a result of unprotected coitus (Presser, 1974; Jaffee and Dryfoos, 1976; Zelnik and Kantner, 1977).

10. List things most liked and disliked about taking care of school-aged children.

The commitment to giving birth is a long-standing one that is the result of a series of decisions (Juhasz, 1975). The decision to have a child should be based on realistic values related to children. A high proportion of children born to adolescent mothers are unintended as a result of unprotected coitus (Presser, 1974; Jaffee and Dryfoos, 1976; Zelnik and Kantner, 1977).

58. Suggest qualities which are important for parents to have.

Adolescent pregnancy frequently results in high social and medical risks to parents and their children (Sarrel and Davis, 1966; Howard, 1971; Presser, 1974; Johnson, 1974; Klerman, 1974). Decisions resulting in parenthood are typically not thought out well by adolescents in the stage of concrete operations (Hatcher, 1973; Conger, 1977). Choice to have a child should be based on realistic personal values rather than on lack of effective contraceptive use as is typical among many adolescents (Jaffee and Dryfoos, 1976).

Developmental Task:

Developing Personal Independence.

Goal:

To develop skill in use of a rational decision-making process with responsibility for consequences of actions.

Theme:

Decision-making.

79. Define the following terms: values, goals and decision-making.

Young adolescents who become pregnant frequently believe themselves to be unable to control their lives (Brunswick, 1971; Cvetkovich, 1975). Young people should be taught to engage in problem-solving and decision-making particularly in relationship to roles (Dellas and Gaier, 1975). Adolescents in the stage of concrete operations need assistance in concept formation (Hatcher, 1973; Conger, 1977; Patterson, 1977).

78. Correctly identify the steps of decision-making.

Decisions related to sexual behavior are not as clear-cut as subjects themselves believed them to be (Kirkendall, 1967). Adolescents with a well-developed sense of futurity probably are the least likely to become pregnant (Bruce, 1978) while pregnant girls seem to feel out of control of life situations (Brunswick, 1971). Sexual behavior is a result of relationship-based decision-making (D'Augelli and D'Augelli, 1977).

51. Explain the differences between personal goals and family goals.

An interpersonal skills approach to pregnancy prevention is recommended (Schinke et al., 1979). Since adolescent pregnancy is sometimes associated with family dynamics (Youngs and Niebyl, 1975; Zongker, 1977; Cobliner, 1977), it is important to understand how personal goals are related to family goals. Adolescents in the stage of concrete operations need assistance in relating behaviors with actions (Patterson, 1977).

67. Cite the consequences of having premarital sexual intercourse.

Adolescents are interested in learning about intercourse and its consequences (Rubenstein et al., 1976; Pietrofesa and Pietrofesa, 1976). Adolescents in the stage of concrete operations need help in relating specific behaviors to outcomes (Conger, 1977; Patterson, 1977).

9. Weigh the consequences of premarital pregnancy.

Pregnancy among adolescents has serious social and medical consequences (Sarrel and Klerman, 1969; Miller, 1973; Presser, 1974; Zelnik and Kantner, 1974; Moore and Waite, 1977; Trussell and Menken, 1978). Adolescents in the stage of concrete operations need help in relating specific behaviors to outcomes (Hatcher, 1973; Conger, 1977; Patterson, 1977).

45. List reasons why young people fail to plan for sexual intercourse.

Socialization discourages direct communication about sex, preventing the possibility of planning for the use of birth control (Scales, 1977). Planning for intercourse makes sex seem premeditated and this is not highly condoned (Bender, 1973; Bragonier, 1973; Cvetkovich et al., 1975). Young people feel very uncomfortable talking about birth control before having sex (Scales, 1977).

27. State advantages of planning for sexual activity.

Pregnant adolescents view themselves as less in control of their life situations than did nonpregnant adolescents of the same age (Brunswick, 1971; Cvetkovich et al., 1975). Effective contraception among women requires a change in self-concept from nonsexually active to sexually active (Lane, 1973).

43. Explain why couples may fail to use birth control.

Sexually active couples fail to use birth control as a result of inadequate knowledge as well as complex sets of interfering beliefs and motives (Furstenberg, 1971; Hatcher, 1973). Reasons given by adolescents for not using birth control typically are the following: time of month, low risk, non-availability of contraception, hedonistic objections, desire to become pregnant, moral/medical objections (Shah, Zelnik, and Kantner, 1975; Scales, 1977).

66. Compare the concept of responsibility with that of romantic notion.

Couples often believe in sexual egalitarianism with joint responsibility for birth control (Bender, 1973; Scales, 1977) while many couples fail to use birth control during sexual activity (Kantner and Zelnik, 1976, 1978).

2. Explain how both partners can take responsibility for birth control.

Programs related to pregnancy prevention should direct efforts at attitudes toward birth control (Johnson, 1974). Discussions related to birth control frequently occur after first intercourse (Scales et al., 1977). Male methods of birth control often are first methods used with reliance upon male responsibility (Hatcher, 1973; Wolfish, 1973; Presser, 1974). Couples need to decide which partner will use birth control, how the birth control will be used and how it will be obtained.

42. Suggest ways in which sexual responsibility can be handled.

Young people frequently suggest that both partners should take responsibility for sexual activity (Bender, 1973). Responsibility related to sexual activity requires consideration of the outcomes of sexual activity (Juhasz, 1974) with active planning related to prevention of birth and venereal disease (Stern and Mackenzie, 1975; Zelnik and Kantner, 1977).

23. Identify decisions which are made by self and those made by parents.

Parents are blamed for pregnancy by pregnant adolescents themselves (Hatcher, 1973). Pregnancy is sometimes used as a means of striking out against parents (Youngs and Niebyl, 1975; Cobliner, 1977; Zongker, 1977) while adolescents themselves must pay the consequences in terms of life-style and careers (Howard, 1971; Presser, 1974; Card and Wise, 1978).

83. Identify the areas in a teenager's life for which he/she is responsible.

Pregnant adolescents seemed to feel less in control of life situations that non-pregnant adolescents (Brunswick, 1971). Adolescents with a well-developed sense of futurity are probably the least likely to become pregnant (Bruce, 1978). Adolescents who become pregnant are faced with the unanticipated responsibilities associated with pregnancy and/or parenthood (Presser, 1974; Card and Wise, 1978).

76. Suggest advantages and disadvantages of being single.

Lifestyles are related to sexual decisions (Juhasz, 1975; Guttmacher Institute, 1978). A pregnancy prevention program should deal with realistic parenthood and its alternative (Goldfarb et al., 1977).

48. Suggest advantages and disadvantages of getting married.

Lifestyles are related to sexual decisions (Juhasz, 1975; Guttmacher Institute, 1978). A program of pregnancy prevention should deal with realistic parenthood and its alternatives (Goldfarb et al., 1977).

38. Suggest advantages and disadvantages of having children.

Lifestyles are related to sexual decisions (Juhasz, 1975; Guttmacher Institute, 1978). A program of pregnancy prevention should deal with realistic parenthood and its alternatives (Goldfarb et al., 1977).

60. Investigate an interesting job.

A program of pregnancy prevention should include realistic parenthood and its alternatives (Goldfarb, 1977). Young women have not been highly motivated to seek places in the job market (Presser, 1974; Furstenberg, 1976); roles of wife and mother have been more highly encouraged (Gordon, 1976,.

63. Identify personal goals related to marriage and family.

Roles related to desire to marry are associated with early intercourse (Cvetkovich et al., 1978). Permissiveness with affection is accepted among young people as a dominant standard of behavior without concomitant attention to birth control (Reiss, 1976; Zelnik and Kantner, 1977). Parenthood and marriage are unintended outcomes of sexual activity for many young people (Jaffee and Dryfoos, 1976).

Developmental Task:

Developing Attitudes Towards Social Groups and Institutions

Goal:

To integrate individual and personal social pressures with the needs of the family.

Theme:

Family Relationships.

15. Compare mature and immature ways of achieving independence from parents.

Pregnancy is sometimes an attempt to deal with maladaptive family behaviors (Youngs and Niebyl, 1975) with girls using their pregnancies in order to strike out at their parents (Cobliner, 1973). Young pregnant adolescents tend to blame authority figures, including parents, for pregnancy (Hatcher, 1973).

20. Suggest guidelines for working out disagreements with parents.

Pregnancy as a means of striking out against parents (Cobliner, 1973; Hatcher, 1973: Youngs and Niebyl, 1975; Zongker, 1977) is an unhealthy means of conflict resolution. Adolescents need help in developing positive ways of resolving conflicts.

55. Practice ways of working out disagreements with parents.

Pregnancy as a means of striking out against parents (Cobliner, 1973; Hatcher, 1973; Youngs and Niebyl, 1975; Zongker, 1977) is an unhealthy means of conflict resolution. Adolescents therefore, need assistance in utilizing positive means of resolving conflicts.

56. Identify and discuss sources of disagreements between young people and their parents.

In order to deal with disagreements adolescents must be able to identify sources of disagreement. Psychological struggles of adolescents are frequently intensified by family instabilities (Youngs and Niebyl, 1975; Zongker, 1977). Some adolescent women use pregnancy as a means of striking out against their parents (Cobliner, 1973). Young pregnant adolescents tend to blame authority figures, including parents, for pregnancy (Hatcher, 1973).

80. Explain how cooperation among family members helps each individual to achieve personal goals.

Psychological struggles of adolescence are frequently intensified by family instabilities (Youngs and Niebyl, 1975; Zongker, 1977). While adolescent pregnancy is sometimes used by adolescent women as a means of striking out against parents (Cobliner, 1973), this is not a healthy way of achieving goals. Cooperation among family members is far more likely to result in satisfactory achievement of goals for all family members.

16. Discuss the responsibilities of being the parent of a teenager.

Adolescent pregnancy is a problem affecting both adolescents and their parents (Wilson, 1973; Zelnik and Kantner, 1974; Smith, 1975) and one which requires adjustment of goals of all family members.

72. Summarize the responsibilities of being the parent of an infant or toddler.

Responsibilities of parenthood are particulary heavy for young mothers and fathers in high-risk medical and social situations (Menkin, 1972; Chilman, 1978). Adolescents in the stage of concrete operations need help in relating sexual decision-making to consequences of parenthood (Hatcher, 1973; Juhasz, 1975; Conger, 1977).

Developmental Task:

Learning to Get Along With Age Mates.

Goal:

To acquire the skills requisite for social life and effective communication among friends and peers.

Theme:

Interpersonal Relationships.

50. Describe characteristics of meaningful friendships among members of the same sex and the oppcaite sex.

Youth culture to a large extent determines acceptability of behaviors, including sexual behaviors (Poveda, 1972; Maddock, 1973; Jessor and Jessor, 1975). Pregnant adolescents sometimes do not have satisfying relationships with friends (Maddock, 1973).

21. Describe ways in which people can show their love for one another.

Various kinds of love require different commitments and therefore different kinds of sexual behaviors (Fromm, 1956; May, 1969; Juhasz, 1975).

25. Describe characteristics of meaningful dating relationships.

Interpersonal relationships in general (Juhasz, 1972; Maddock, 1973) influence sexual behavior with dating relationships overshadowing all others in the decision to have sexual intercourse (D'Augelli and D'Augelli, 1977).

44. Explain how decisions are made in dating relationships.

Sexual behavior is a result of relationship-based decision-making (D'Augelli and D'Augelli, 1977). Frequently the person with the least amount of comitt-ment in a dating relationship has the greatest amount of power (Skipper and Nass, 1975). The dominant partner in the dating relationship controls the sexual decision-making (D'Augelli and D'Augelli, 1977). Both fear and socialization keep individuals in dating relationships from discussing birth control openly (Scales, 1977; Hertz, 1977).

62. Suggest ways in which people are accepted into groups.

Standards associated with sexual behavior emanate from the peer group (Opler, 1971; Maddock, 1973; Jessor and Jessor, 1975) and affect sexual decisions (Kirkendall, 1967; Collins, 1974).

52. Describe the characteristics of meaningful marriage relationships.

Learning how to get along with members of the opposite sex is a major task of young adolescence (Juhasz, 1972; Havighurst, 1973). Because marriages resulting from unintended pregnancies occur frequently and are often unsuccessful (LaBarre, 1968; The Alan Guttmacher Institute, 1975; Lorenzi, 1975; Wolfish, 1978) characteristics of meaningful marriage relationships need to be examined.

33. Describe the following kinds of love: love of God, brotherly love, love between a man and a woman, and love between parents and child.

Various kinds of love are part of the human condition (Fromm, 1956; May, 1969; Powell, 1974). Each of these requires different decisions (Juhasz, 1975).

7. Identify basic emotions of people.

Sex education of pregnant women lacked emotional integration (Hertz, 1977). Emotional integration must occur in educational programs in order for adolescents to use information personally (Schinke and Gilchrist, 1977; Schinke et al., 1979). Emotional factors such as guilt have contributed to failure to use contraceptives and subsequent pregnancy (Kane et al., 1973; Reiss et al., 1975).

75. Practice ways of dealing with anger.

Learning to get along with age mates is a major sex-related task of adolescence (Juhasz, 1972; Havighurst, 1973). Significant differences in communication skills have been found between pregnant and nonpregnant adolescent women. Interpersonal skills training offers potential for pregnancy prevention (Schinke and Gilchrist, 1977; Schinke et al., 1979). Learning how to deal with anger seems especially important in view of the fact that pregnancy itself is sometimes an attempt to deal with maladaptive family behaviors (Youngs and Nieby, 1975).

53. Explain how emotions can affect actions.

Young people are aware of biological and emotional conflicts accompanying puberty (Carter, 1970). Emotional factors such as guilt have contributed to failure to use contraceptives and subsequent pregnancy (Kane et al., 1973; Reiss et al., 1975). Further, the sex education of pregnant adolescents has been shown to lack emotional integration (Hertz, 1977).

74. Explain how emotions affect the decision to use birth control.

Failure to deal with personal aspects of sex is related to neglect for contraception (Hatcher, 1973; Bragonier, 1973; Cvetkovich et al., 1975; Reiss et al., 1975).

13. Establish and use guidelines for communication well with friends.

Getting along well with age mates is a major task of childhood and young adolescence (Havighurst, 1973) and serves as a basis for further development. Interpersonal skills of pregnant adolescents have been shown to be less well-developed than those of adolescent women who do not become pregnant (Schinke and Gilchrist, 1977; Schinke et al., 1979).

12. Use words and body language to express thoughts and feelings.

Communication among people is verbal and nonverbal. Learning how to get along with peers is a major sex-related task of adolescence (Juhasz, 1972; Havighurst, 1973). Significant differences in communication skills have been found between pregnant and nonpregnant adolescents. Interpersonal skills training offers potential for pregnancy prevention (Schinke and Gilchrist, 1977; Schinke et al., 1979).

39. Describe ways in which communication between two people can be blocked.

Socialization keeps people from directly discussing sex and birth control (Scales, 1977). Pregnant adolescents have been found to be less effective than nonpregnant controls in communication skills (Schinke and Gilchrist, 1977; Schinke et al., 1979).

29. Practice ways of working out disagreements between friends.

Learning to get along with age mates is a major sex-related task of adolescence (Juhasz, 1972; Havighurst, 1973). Significant differences in communication skills have been found between pregnant and nonpregnant adolescent women. Interpersonal skills training offers potential for pregnancy prevention (Schinke and Gilchrist, 1977; Schinke et al., 1979).

Developmental Task:

Learning An Appropriate Masculine or Feminine Social Role.

Goal:

To acquire an understanding of the wide range of role behaviors and their possible consequences.

Theme:

Role Development.

18. Discuss ways in which girls try to attract boys.

    Seductive processes of boys and girls are factors that enter into sexual decision making (Kirkendall, 1967). Adolescents feel undue pressure in adhering to unrealistic role models emphasizing attractiveness (Deschin, 1969; Mendelsohn, 1973).

69. Describe ways in which roles of husband, father, and career person sometimes conflict with and complement one another.

    Roles of husband, father and career person often are influenced by unintended pregnancy in adolescence (LaBarre, 1968; Wolfish, 1973; Juhasz, 1974; Moore and Waite, 1977). Adolescents with a well developed sense of futurity are least likely to experience pregnancy (Bruce, 1978). Programs related to the realities and alternatives of parenting are among the best means of approaching pregnancy prevention through education (Goldfarb, 1977).

24. Describe ways in which roles of wife, mother, and career person sometimes conflict with and complement one another.

    Lack of perception related to alternative roles of women provides incentive to some adolescents for delaying pregnancy (Klerman, 1975). Roles of wife, mother, and career person often are influenced by unintended pregnancy in adolescence (LaBarre, 1968; Howard, 1971; Juhasz, 1974). Adolescents with a well-developed sense of futurity are least likely to experience pregnancy (Bruce, 1968). Programs related to the realities and alternatives of parenting are among the best means of approaching pregnancy prevention through education (Goldfarb, 1977).

14. Define the term "role."

    High orientation to role of mother as well as stereotyped role perceptions have been associated with passivity in the use of contraception (Kane et al., 1971; Mendelsohn, 1973; Goldfarb, 1977; Dellas and Gaier, 1978) and early intercourse (Cvetkovich, et al., 1978). Students in the stage of concrete operations need help in defining fundamental concepts (Conger, 1977; Patterson, 1977).

64. Explain the difference between love and affection.

Maturity involves commitment of those involved (Fromm, 1956; May, 1969; Powell, 1974). Adolescents often believe in permissiveness with affection (Sorensen, 1973) and engage in sexual activity without a clear understanding of the consequences that follow (Juhasz, 1975) and the incumbent responsibilities.

49. Illustrate appropriate ways of declining a date.

Communication skills of pregnant and nonpregnant adolescents are significantly different (Schinke and Gilchrist, 1977; Schinke et al., 1979). The dating relationship is the most fundamental influence in sexual relationships (D'Augelli and D'Augelli, 1977).

6. Suggest ways of asking for a date.

Communication skills of pregnant and nonpregnant adolescents are significantly different (Schinke, 1977; Schinke et al., 1979). The dating relationship is the most fundamental influence in sexual relationships (D'Augelli and D'Augelli, 1977).

32. Assess advantages and disadvantages of an interesting job.

Career roles have not been stressed to the extent that motherhood and marriage roles for women have (Dellas and Gaier, 1977; Chilman, 1978). Young people with a well-developed sense of futurity are least likely to have an adolescent pregnancy (Bruce, 1978).

8. Identify qualities of people who succeed in an interesting job.

Career roles have not been stressed to the extent that motherhood and marriage roles for women have (Dellas and Gaier, 1977; Chilman, 1978). Young people with a well-developed sense of futurity are least likely to have an adolescent pregnancy (Bruce, 1978).

19. Explain how the messages received from parents, clergy, and friends both encourage and discourage sexual activity.

Youth and adults are in the process of involving moral values (Beigel, 1966; Becwar, 1972; Poole, 1976; Gebhard, 1977). The attitude of permissiveness with affection toward sexual behavior lags behind the behavior itself as well as behind permissiveness toward contraceptive use (Blake, 1973). Statements from various church groups are neither consistent nor clear (Reiss, 1966; Martinson, 1968).

41. Explain how the messages received from books, television, and movies both encourage and discourage sexual activity.

Mass media as well as adult sectors of society present messages about sexuality in such a way that it appears exciting, thrilling, and thus very attractive to young people. Such messages belie the facts about sexuality (Martinson, 1968; Deschin, 1969; Mosse, 1969; Thornberg, 1974; Baran, 1976) and are perplexing in a society where there is no single norm of sexual behavior (Bernard, 1966; Gebhard, 1966; Reiss, 1976).

35. Compare roles of mothers and fathers and explain how these are acquired.

Adolescent acquisition of the roles of mother and father often occur as a result of unintended pregnancy (Jaffee and Dryfoos, 1976) and are quite unstable (Lorenzie, 1977). Young people often assume sex role behaviors with a great deal of naivete (Thornberg, 1974; Goldfarb, 1977; Dellas and Gaier, 1978).

84. Compare roles of husbands and wives and explain how these are acquired.

Adolescent acquisition of the roles of husbands and wives occur as a result of unintended pregnancy (LaBarre, 1968; Wolfish, 1973; Chilman, 1978). Such Marriages are quite unstable (Lorenzi, 1977). Young people often assume sex role behavior with a great deal of naivete (Thornberg, 1974; Goldfarb, 1977; Dellas and Gaier, 1978).

APPENDIX C

FINAL INSTRUMENT

File No. _____

NEEDS ASSESSMENT INVENTORY

for

TEENAGE PREGNANCY PREVENTION

by

Anne D. Johnson, Ph.D., Home Economics Education
Betty R. Morse, Ph.D., Home Economics Education
James R. Johnson, Ph.D., Curriculum and Instruction
Susan Ryan, M. S., Home Economics Education
Rita Smith, B. S., Home Economics Education

PLEASE SUPPLY THE INFORMATION REQUESTED BELOW:

Age: _____ Sex: (check one) ☐ Male ☐ Female

Marital Status: (check one) ☐ Single ☐ Married ☐ Separated ☐ Divorced

Education Completed: (circle highest year completed) 1 2 3 4 5 6 7 8 9 10 11 12

College Education Completed: (circle highest year completed) 1 2 3 4

How many brothers and/or sisters do you have? _____

How many children do you have in each age category? (fill in blank)
If no children check here. ☐

1-5 ___ 6-10 ___ 11-15 ___ 16-20 ___ 20 or older ___

In which type of community do you live? (check one)

Rural ___ Small town ___ Small city ___ Suburb ___ City ___

Religious affiliation: (check one)

Catholic ___ Protestant ___ Jewish ___ Other ___ None ___

DIRECTIONS: Below is a series of skills related to prevention of pregnancy for adolescents between thirteen and fifteen years of age. These skills could be taught in an educational program.

Please indicate your level of approval for including each skill in an educational program for adolescents between thirteen and fifteen years of age by circling the appropriate number to the right of each item. Please be sure to complete every item.

1 = Strong disapproval
2 = Moderate disapproval
3 = Slight disapproval
4 = Neutral, neither approval or disapproval
5 = Slight approval
6 = Moderate approval
7 = Strong approval

EXAMPLE: APPROVAL

1. Explain the difference between love and attraction. 1 2 3 4 5 6 7

If you strongly approve of this skill being included in an educational program aimed at the prevention of pregnancy in adolescents, circle 7.

2. Describe important factors in selecting a marriage partner. 1 2 3 4 5 6 7

If you disapprove somewhat of this skill being included in an educational program aimed at the prevention of pregnancy in adolescents, circle 2.

Please go to next page.

Key for marking the level of approval for each skill:

1 = Strong disapproval
2 = Moderate disapproval
3 = Slight disapproval
4 = Neutral, neither approval or disapproval
5 = Slight approval
6 = Moderate approval
7 = Strong approval

SKILLS FOR ADOLESCENTS	APPROVAL
1. State signs of pregnancy in the female.	1 2 3 4 5 6 7
2. Explain how both partners can take responsibility for birth control.	1 2 3 4 5 6 7
3. Describe ways in which the double standard operates in male-female relationships.	1 2 3 4 5 6 7
4. Explain how each of the methods of birth control is used and how effective each is.	1 2 3 4 5 6 7
5. List things most liked and disliked about taking care of babies and toddlers.	1 2 3 4 5 6 7
6. Suggest ways of asking for a date.	1 2 3 4 5 6 7
7. Identify basic emotions of people.	1 2 3 4 5 6 7
8. Identify qualities of people who succeed in an interesting job.	1 2 3 4 5 6 7
9. Weigh the consequences of premarital pregnancy.	1 2 3 4 5 6 7
10. List things most liked and disliked about taking care of school-aged children.	1 2 3 4 5 6 7
11. Explain the effects of failing to treat venereal diseases.	1 2 3 4 5 6 7
12. Explain the use of verbal and nonverbal language to express thoughts and feelings.	1 2 3 4 5 6 7
13. Establish and use guidelines for communicating well with friends.	1 2 3 4 5 6 7
14. Define the term "role."	1 2 3 4 5 6 7
15. Compare mature and immature ways of achieving independence from parents.	1 2 3 4 5 6 7
16. Discuss the responsibilities of being the parent of a teenager.	1 2 3 4 5 6 7
17. State causes, symptoms, cures, and ways of preventing each of the venereal diseases.	1 2 3 4 5 6 7
18. Describe ways in which girls try to attract boys.	1 2 3 4 5 6 7
19. Explain how the messages received from parents, clergy, and friends both encourage and discourage sexual activity.	1 2 3 4 5 6 7
20. Suggest guidelines for working out disagreements with parents.	1 2 3 4 5 6 7
21. Describe ways in which people can show their love for one another.	1 2 3 4 5 6 7
22. Describe ways in which male and female bodies change during adolescence.	1 2 3 4 5 6 7
23. Identify decisions which are made by self and those made by parents.	1 2 3 4 5 6 7
24. Describe ways in which roles of wife, mother, and career person sometimes conflict with and complement one another.	1 2 3 4 5 6 7
25. Describe characteristics of meaningful dating relationships.	1 2 3 4 5 6 7
26. Compare male and female reproductive systems.	1 2 3 4 5 6 7
27. State advantages of planning for sexual activity.	1 2 3 4 5 6 7
28. Describe ways in which sexual feelings may be expressed.	1 2 3 4 5 6 7

Please go to next page.

Key for marking the level of approval for each skill:

1 = Strong disapproval
2 = Moderate disapproval
3 = Slight disapproval
4 = Neutral, neither approval or disapproval
5 = Slight approval
6 = Moderate approval
7 = Strong approval

29.	Practice ways of working out disagreements between friends.	1 2 3 4 5 6 7
30.	Share and discuss moral values with parents, clergy, teachers and friends.	1 2 3 4 5 6 7
31.	Describe a medical examination required for obtaining methods of birth control.	1 2 3 4 5 6 7
32.	Assess advantages and disadvantages of an interesing job.	1 2 3 4 5 6 7
33.	Describe the following kinds of love: love of God, brotherly love, love between a man and a woman, and love between parents and child.	1 2 3 4 5 6 7
34.	Explain why people sometimes feel guilty about their sexual feelings.	1 2 3 4 5 6 7
35.	Compare roles of mothers and fathers and explain how these are acquired.	1 2 3 4 5 6 7
36.	Discuss personal values that result in appropriate behavior in dating situations.	1 2 3 4 5 6 7
37.	Explain the difference among three phases of the menstrual cycle indicating when conception is most likely to occur.	1 2 3 4 5 6 7
38.	Suggest advantages and disadvantages of having children.	1 2 3 4 5 6 7
39.	Describe ways in which communication between two people can be blocked.	1 2 3 4 5 6 7
40.	Explain how hormones affect growth and development during adolescence.	1 2 3 4 5 6 7
41.	Explain how the messages received from books, TV, and movies both encourage and discourage sexual activity.	1 2 3 4 5 6 7
42.	Suggest ways in which sexual responsibility can be handled.	1 2 3 4 5 6 7
43.	Explain why couples may fail to use birth control.	1 2 3 4 5 6 7
44.	Explain ho decisions are made in dating relationships.	1 2 3 4 5 6 7
45.	List reasons why young people fail to plan for sexual intercourse.	1 2 3 4 5 6 7
46.	Explain the importance of a medical examination in obtaining some methods of birth control.	1 2 3 4 5 6 7
47.	State functions of each of the major parts of the male and female reproductive systems.	1 2 3 4 5 6 7
48.	Suggest advantages and disadvantages of getting married.	1 2 3 4 5 6 7
49.	Illustrate appropriate ways of declining a date.	1 2 3 4 5 6 7
50.	Describe characteristics of meaningful friendships among members of the same sex and the opposite sex.	1 2 3 4 5 6 7
51.	Explain the differences between personal goals and family goals.	1 2 3 4 5 6 7
52.	Describe the characteristics of meaningful marriage relationships.	1 2 3 4 5 6 7
53.	Explain how emotions can affect actions.	1 2 3 4 5 6 7
54.	Discuss the meaning of kissing, petting, and intercourse for boys and girls.	1 2 3 4 5 6 7
55.	Practice ways of working out disagreements with parents.	1 2 3 4 5 6 7
56.	Identify and discuss sources of disagreements between young people and their parents.	1 2 3 4 5 6 7

Please go to next page.

Key for marking the level of approval for each skill:

1 = Strong disapproval
2 = Moderate disapproval
3 = Slight disapproval
4 = Neutral, neither approval or disapproval
5 = Slight approval
6 = Moderate approval
7 = Strong approval

57.	Recognize male and female similarities in stages of sexual excitement.	1 2 3 4 5 6 7
58.	Suggest qualities which are important for parents to have.	1 2 3 4 5 6 7
59.	Classify those contraceptives which are used by the female and those which are used by the male.	1 2 3 4 5 6 7
60.	Investigate an interesting job.	1 2 3 4 5 6 7
61.	Explain the advantages and disadvantages of each method of birth control.	1 2 3 4 5 6 7
62.	Suggest ways in which people are accepted into groups.	1 2 3 4 5 6 7
63.	Identify personal goals related to marriage and family.	1 2 3 4 5 6 7
64.	Explain the difference between love and affection.	1 2 3 4 5 6 7
65.	State the methods of birth control that require a doctor's prescription.	1 2 3 4 5 6 7
66.	Compare the concept of responsibility with that of romantic notion.	1 2 3 4 5 6 7
67.	Cite the consequences of having premarital sexual intercourse.	1 2 3 4 5 6 7
68.	Discuss concerns that adolescents have about their changing bodies.	1 2 3 4 5 6 7
69.	Describe ways in which the roles of husband, father, and career person sometimes conflict with and complement one another.	1 2 3 4 5 6 7
70.	Explain reasons why people fail to have venereal diseases treated by a doctor.	1 2 3 4 5 6 7
71.	Explain reasons why some teenagers become pregnant.	1 2 3 4 5 6 7
72.	Summarize the responsibilities of being the parent of an infant or toddler.	1 2 3 4 5 6 7
73.	Explain ways in which sexual feelings fit into lifestyles.	1 2 3 4 5 6 7
74.	Explain how emotions affect the decision to use birth control.	1 2 3 4 5 6 7
75.	Practice ways of dealing with anger.	1 2 3 4 5 6 7
76.	Suggest advantages and disadvantages of being single.	1 2 3 4 5 6 7
77.	Discuss ways in which boys try to attract girls.	1 2 3 4 5 6 7
78.	Correctly identify the steps of decision-making.	1 2 3 4 5 6 7
79.	Define the following terms: values, goals, decision-making.	1 2 3 4 5 6 7
80.	Explain how cooperation among family members helps each individual to achieve personal goals.	1 2 3 4 5 6 7
81.	Identify personality characteristics that are important in friends, dates, and marriage partners.	1 2 3 4 5 6 7
82.	Identify places where safe and effective contraceptives can be obtained.	1 2 3 4 5 6 7
83.	Identify the areas in a teenager's life for which he/she is responsible.	1 2 3 4 5 6 7
84.	Compare roles of husbands and wives and explain how these are acquired.	1 2 3 4 5 6 7

APPENDIX D

CORRESPONDENCE

RALPH D. TURLINGTON
COMMISSIONER

STATE OF FLORIDA
DEPARTMENT OF EDUCATION

TALLAHASSEE 32304

May 1, 1979

Dear Participants:

The University of West Florida Department of Vocational and Technical Studies is developing an instrument to measure acceptance of objectives related to pregnancy prevention among young adolescents. The instrument could eventually be used by private agencies and public institutions to gather information from concerned individuals for use in planning pregnancy prevention programs for young people. Specific objectives related to pregnancy prevention might be included or deleted from such programs based on a measurement of their acceptance.

This instrument has been reviewed by two groups: a statewide group of Home Economics educators and administrators, as well as by a group of national leaders in the field of Home Economics.

It is now important to pilot-test the instrument, and your cooperation is being requested. Please take a few minutes of your time to respond to the questions on the NEEDS ASSESSMENT INVENTORY FOR TEENAGE PREGNANCY PREVENTION.

Respectfully,

Allie E. Ferguson

Allie E. Ferguson
Occupational Program Director
Home Economics Education

AEF:mb

an equal opportunity employer

ORANGE COUNTY PUBLIC SCHOOLS
P.O. Box 271 • 434 North Tampa Avenue • Orlando, Florida 32802

May 24, 1979

Dr. Betty R. Morse
Director of Home Economics
University of West Florida
Pensacola, Florida 32504

Dear Dr. Morse:

In response to your letter of May 10, 1979, please find enclosed the completed questionnaires which were given to two (2) groups: a student advisory council made up of representatives from each high school, the student council president, as well as four (4) respondents from our District Advisory Committee who represent a subcommittee on family life programs.

This letter is intended to respond to your request as well as to provide official permission for conducting this part of the pilot test in our District. We appreciate the opportunity to be of service in this research effort and sincerely hope the results of this effort will be shared with us upon completion.

Please do not hesitate to call me should you have any further questions. Best wishes for success of your project.

Sincerely,

Pamela S. Mayer
Administrative Assistant
to the Superintendent

vpl-4/C
5/24/79

Enclosure

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THE UNIVERSITY OF WEST FLORIDA
PENSACOLA, FLORIDA 32504
(904) 476-9500

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION INSTITUTION

TECHNICAL & VOCATIONAL STUDIES
BUSINESS EDUCATION
INDUSTRIAL ARTS
INDUSTRIAL TECHNOLOGY
VOCATIONAL EDUCATION
EDUCATIONAL LEADERSHIP

May 8, 1979

Dear Recipient:

The University of West Florida, Department of Vocational and Technical Studies is developing an instrument to measure acceptance of objectives related to pregnancy prevention among adolescents. The instrument could eventually be used by private agencies and public institutions to gather information from concerned individuals for use in planning pregnancy prevention programs for young people. Specific objectives could be included or deleted from such programs according to a measure of their acceptance. Each objective on the instrument has been recommended in at least three sources of professional literature related to adolescent pregnancy.

As a part of the pilot test of this instrument, we are seeking the reactions of Florida citizens. Your name was chosen by random selection from telephone directories of Florida metropolitan areas. Please take time to respond to the PREGNANCY PREVENTION NEEDS ASSESSMENT INVENTORY and return it in the enclosed envelope.

Sincerely,

A. H. Doerr,
Vice President for
Academic Affairs

ah
Enclosure

PS· You will not in any way be personally identified with this research project. Your response will be entirely confidential.

THE UNIVERSITY OF WEST FLORIDA
PENSACOLA, FLORIDA 32504
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May 8, 1979

Dear Recipient:

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Sincerely,

A. H. Doerr,
Vice President for
Academic Affairs

ah
Enclosure

PS. You will not in any way be personally identified with this research project. Your response will be entirely confidential.

APPENDIX E

CONSULTANTS TO THE PROJECT

CONSULTANTS TO THE PROJECT

The following consultants were valuable for their insights in designing and conducting the research:

Mrs. Louise Bankey, Director of the Toledo Center for Sexual Therapy, Toledo, Ohio.

Mrs. Betty Jackson, Educational Consultant, Pensacola, Florida.

Dr. Jerry Oglesby, Associate Professor of Mathematics and Statistics, The University of West Florida, Pensacola, Florida.

Dr. Judythe Patberg, Assistant Professor of Secondary Education, The University of Toledo, Toledo, Ohio.

Dr. L. Hobdy Perkins, Professor and Director, Faculty of Technical and Vocational Studies, The University of West Florida, Pensacola, Florida.

Dr. Sharon Rodgers, Assistant Professor of Library Administration, The University of Toledo, Toledo, Ohio.

Dr. David Sherry, Associate Professor of Mathematics and Statistics, The University of West Florida, Pensacola, Florida.

Dr. William Wiersma, Director of Center for Educational Research and Services, The University of Toledo, Toledo, Ohio.

Dr. James Zaferau, Research Associate of Educational Research and Development Center, The University of West Florida, Pensacola, Florida.

The following members of University of West Florida Pregnancy Prevention National Advisory Group were valuable for counsel, professional suggestions, and encouragement:

Dr. Camille Bell, Professor of Home Economics Education, Texas Tech University, Lubbock, Texas.

Dr. Jessie Bernard, Family Issues Expert, Center for the Family American Home Economics Association, Washington, D. C.

Dr. Marjorie East, Professor of Home Economics Education, The Pennsylvania State University, University Park, Pennsylvania.

Dr. Carroll Kennedy, Professor of Family and Child Development, Kansas State University, Manhattan, Kansas.

Dr. Agnes F. Ridley, Former Dean, Mississippi University for Women, Columbus, Mississippi.

The following individuals were valuable in the selection of samples related to the study:

Mrs. Evelyn Blumenthal, Services Coordinator, Toledo Crittenton Services, Toledo, Ohio.

Mr. John DeWitt, Administrative Director, Children's Home Society of West Florida, Pensacola, Florida.

Dr. Pam Mayer, Deputy Superintendent, Orange County Schools, Orange County, Florida.

Mr. Norman Merkel, Executive Director, Toledo Crittenton Services, Toledo, Ohio.

Mrs. Betty Morais, Director, Planned Parenthood of Greater Toledo, Toledo, Ohio.

Mrs. Gertrude Roberts, Supervisor of Home Economics, Orange County, Florida.

Mrs. Diane Shankland, Educational Director, Planned Parenthood of Greater Toledo, Toledo, Ohio.

The following colleague was invaluable in proofreading and editing:

Dr. Mary Jo Henning, Professor of Secondary Education, The University of Toledo, Toledo, Ohio.

BIBLIOGRAPHY

The Alan Guttmacher Institute. Eleven million teenagers. New York: The Alan Guttmacher Institute, 1976.

The Alan Guttmacher Institute. Planned births, the future of the family, and the quality of American life: Towards a comprehensive national policy and program. New York: The Alan Guttmacher Institute, 1977.

The Alan Guttmacher Institute. Contraceptive services for adolescents: United States, each state and county, 1975. New York: The Alan Guttmacher Institute, 1978.

Abernethy, V. Illegitimate conception among teenagers. American Journal of Public Health, 1974, 64, 7, 662-665.

Adelson, E. Sexuality and psychoanalysis. New York: Brunner/Mazel, 1975.

Ambron, S. Child development. San Francisco: Rinehart Press, 1975.

Ambrose, L. Misinforming pregnant teenagers. Family Planning Perspectives, 1978, 10, 1, 51-53.

Arnold, C. The sexual behavior of inner city adolescent condom users. The Journal of Sex Research, 1972, 8, 4, 298-309.

Arnold, S., and Hoffman, A. Chicago planned parenthood's teen scene: A sociological study for participants. Adolescence, 1974, IX, 35, 371-389.

Ausubel, D., and Ausubel, P. Cognitive development in adolescence. Review of Educational Research, 1966, 36, 4, 403-413.

Baizerman, M. Can the first pregnancy of a young adolescent be prevented? A question which must be answered. Journal of Youth and Adolescence, 1977, 6, 4, 343-351.

Baizerman, M., Sheenam, C., Ellisoi, E., and Schlesinger, E. A critique of research literature concerning pregnant adolescents. Journal of Youth and Adolescence, 1974, 3, 1, 61-75.

Baran, S. Sex on TV and adolescent sexual self-image. Journal of Broadcasting, 1976, 20, 1, 61-68.

Barglow, P., Bornstein, M., Exum, D., Wright, M., and Visotsky, M. Some psychiatric aspects of illegitimate pregnancy in early adolescence. American Journal of Orthopsychiatry, 38, 4, 672-687.

Barrow, L. A study of seventh graders' comprehensions of human reproduction concepts. Journal of School Health, 1977, 47, 2, 119-121.

Becwar, J. Sex education and the new morality. The American Biology Teacher, November, 1972, 34, 8, 452-455.

Bell, R. Parent-child conflict in sexual values. The Journal of Social Issues, 1966, 17, 2, 34-44.

Bell, R., and Chaskes, J. Premarital sexual experience among coeds, 1958 and 1968. Journal of Marriage and the Family, 1970, 32, 1, 81-84.

Bender, S. Sex and the college student. Journal of School Health, 1973, 43, 5, 278-280.

Bengston, V. The generation gap: A review and typology of social-psychological perspectives. Youth and Society, 1970, 2, 7-32.

Bernabie, R., and Leles, S. Behavioral objectives in curriculum and evaluation. Dubuque, Iowa: Kendall/Hunt Publishing Company, 1970.

Bernard, J. The fourth revolution. Journal of Social Issues, 1966, 22, 2, 76-87.

Bettelheim, B. Student revolt. Vital Speeches, 1969, 25, 405-410.

Billingsley, A. Illegitimacy and the black community. In Illegitimacy: Changing services for changing times. New York: National Council on Illegitimacy, 1970, 70-85.

Blake, J. The teenage birth control dilemma and public opinion. Science, 1973, 18, 5, 708-712.

Bowerman, C., Irish, D., and Pope, H. Unwed motherhood: Personal and social consequences. Institute for Research in Social Science: University of North Carolina, Chapel Hill, N. C., 1965.

Bragonier, J. Why do unmarried women fail to use contraceptives? Medical Aspects of Human Sexuality, 1963, 7, 5, 158-163.

Broderick, C. Sexual behavior among pre-adolescents. The Journal of Social Issues, 1966, 22, 2, 6-21.

Bruce, J. Adolescent parents: A special case of the unplanned family. The Family Coordinator, 1978, 27, 1, 75-78.

Brunswick, A. Adolescent health, sex, and fertility. Adolescent Sexuality, 1971, 61, 4, 711-729.

Bugil, H. The parents share. Journal of Sex Research, 1966, 2, 1, 47-50.

Cahn, J. The needs of adolescent women utilizing family planning services. The Journal of Sex Research, 1977, 13, 3, 210-222.

Calderone, M. Contraception, teenagers, and sexual responsibility. The Journal of Sex Research, 1966, 2, 1, 37-40.

Card, J., and Wise, L. Teenage mothers and teenage fathers: The impact of early childbearing on the parents' personal and professional lives. Family Planning Perspectives, 1978, 10, 4, 199-207.

Carns, D. Talking about sex: Notes on first coitus and the double sexual standard. Journal of Marriage and the Family, 1973, 35, 4, 677-688.

Carter, L. The awakening of adolescent femininity. Journal of School Health, 1970, 40, 4, 203-205.

Chamberlin, L., and Girona, R. Our children are changing. Educational Leadership, 1976, 33, 4, 4, 301-305.

Children and parents: Together in the world. Report of Forum 15, 1970 White House Conference on Children. Washington, D. C.: U. S. Government Printing Office, 1971.

Chilman, C. Some psychosocial aspects of female sexuality. Family Coordinator, 1974, 23, 2, 123-132.

_____. Adolescent sexuality in a changing American society. Washington, D. C.: U. S. Department of Health, Education, and Welfare, 1978.

Christensen, H. Value variables in pregnancy timing: Some intercultural comparisons. In Anderson (Ed.), Studies of the family (Vol. 3). Gottingen, Germany: Vandenhoek & Ruprecht, 1958, pp. 29-45.

Christensen, H., and Gregg, C. Changing sex norms in America and Scandinavia. Journal of Marriage and the Family, 1970, 32, 4, 161-627.

Clayton, R. Premarital sexual intercourse: A substantive test of the contingent consistency model. Journal of Marriage and the Family, 1972, 34, 2, 273-281.

Clifford, S. High risk pregnancy: Prevention of prematurity: The sine qua non for reduction of mental retardation and other neurological disorders. New England Journal of Medicine, 1964, 271, 5, 243-249.

Cobliner, W. Pregnancy in the single adolescent girl: The role of cognitive functions. Journal of Youth and Adolescence, 1974, 3, 1, 17-29.

Collins, J. Adolescent dating intimacy: Norms and peer expectations. Journal of Youth and Adolescence, 1974, 3, 4, 317-328.

Collins, P. Sex education in the secondary curriculum: Problems and pseudo-problems. School and Society, October, 1971, 357-359.

Committee on Medical Education. Assessment of sexual functions: A guide to interviewing. New York: Group for the Advancement of Psychiatry, 1973.

Conger, J. A world they never made: The family and social change. Daedalus, 1971, 100, 1105-1138.

_____. Adolescence and youth: Psychological development in a changing world, (2nd ed.). New York: Harper & Row, 1977.

Conley, S., and Haff, R. The generation gap in sex education: Is there one? Journal of School Health, 1974, 44, 8, 428-437.

Cutright, P. Illegitimacy: Myths, causes, and cures. Family Planning Perspectives, 1971, 3, 3, 26-48.

_____. The teenage sexual revolution and the myth of an abstinent past. Family Planning Perspectives, 1972, 4, 1, 24-31.

_____. Illegitimacy: The prospect for change. American Journal of Public Health, 1973a, 63, 765-766.

_____. Timing the first birth: Does it matter? Journal of Marriage and the Family, 1973b, 35, 4, 585-595.

Croake, J., and James, B. A four-year comparison of premarital sexual attitudes. The Journal of Sex Research, 1973, 9, 2, 91-96.

Cvetkovich, G., Grote, B., Bjorseth, A., and Sarkissian, J. On the psychology of adolescents' use of contraceptives. Journal of Sex Research, 1975, 11, 3, 256-270.

Cvetkovich, G., Grote, B., Lueberman, E., and Miller, W. Sex role development and teenage fertility-related behavior. Adolescence, 1978, 13, 50, 231-236.

Dalis, G., and Strasser, B. The starting point for values education. School Health Review, 1974, 5, 1, 2-5.

D'Augelli, J., and D'Augelli, A. Moral reasoning and premarital sexual behavior: Toward reasoning about relationships. Journal of Social Issues, 1977, 33, 2, 46-65.

Dearth, P. Viable sex education in the schools: Expectations of students, parents, and experts. Journal of School Health, 1974, 47, 4, 190-193.

Dellas, M., and Gaier, E. The self and adolescent identity in women: Options and implications. Adolescence, 1975, 10, 39, 399-407.

Deschin, C. The sexual problems of today's youth. The Journal of Sex Research, 1969, 5, 3, 149-161.

Dickens, H. O., Mudd, E. H., Garcia, C. R., Tomar, K., and Wright, D. One hundred pregnant adolescents: Treatment approaches in a university hospital. American Journal of Public Health, 1973, 63, 9, 794-800.

Digest. Children and their teen parents pay price for early childbearing. Family Planning Perspectives, 1979, 11, 3, 198.

Douvan, E., and Adelson, J. The adolescent experience. New York: John Wiley & Sons, 1966.

Dryfoos, J., and Heisler, T. Contraceptive services for adolescents: An overview. Family Planning Perspectives, 1978, 10, 4, 223-233.

Edwards, A. The measurement of personality traits by scales and inventories. New York: Holt, Rinehart & Winston, 1970.

Eisner, E. Emerging models for educational evaluation. School Review, 1972, 80, 4, 573-589.

Elias, J., and Gebhard, P. Sexuality and sexual learning in childhood. Phi Delta Kappan, 1969, 50, 6, 401-405.

Elkind, D. Children and adolescents: Interpretive essays on Jean Piaget. New York: Oxford University Press, 1970.

Erikson, E. The problem of ego identity. Journal of the American Psychoanalytic Association, 1956, 4, 56-121.

_____. Childhood and society. New York: Norton, 1963.

_____. Identity: Youth and crisis. New York: Norton, 1968.

Ewer, P., and Gibbs, J. Relationship with putative father and use of contraception in a population of black ghetto adolescent mothers. Public Health Reports, 1975, 90, 5, 417-423.

Fiedler, D., Lang, D., and Carlson, J. Pathology in the "healthy" female teenager. American Journal of Public Health, 1973, 63, 1, 962-965.

Finkel, M., and Finkel, D. Sexual and contraceptive knowledge, attitudes, and behaviors of male adolescents. Family Planning Perspectives, 1975, 7, 6, 256-260.

Fishbein, M., and Ajgen, I. Belief, attitude, intention, and behavior: An introductory theory to research. Reading, Mass.: Addison-Wesley, 1975.

Fisher, W., Fisher, J., and Byrne, D. Consumer reactions to contraceptive purchasing. Paper presented at the annual meeting of The American Psychological Association, Washington, D. C., 1976.

Ford, C., and Beach, A. Patterns of sexual behavior. New York: Harper & Row, 1951.

Fromm, E. The art of loving. New York: Harper & Row, 1956.

Furstenberg, F., Jr. Birth control experience among pregnant adolescents: The process of unplanned parenthood. Social Problems, 1971, 19, 2, 192-203.

_____. Unplanned parenthood: The social consequences of teenage childbearing. New York: The Free Press, 1976.

Furstenberg, F., Jr., Gordis, L., and Markowitz, M. Birth control knowledge and attitudes among unmarried pregnant adolescents. Journal of Marriage and the Family, 1969, 31, 1, 34, 42.

Gabrielson, I., Goldsmith, S., Potts, L., Mathews, V., and Gabrielson, M. Adolescent attitudes toward abortion: Effects on contraceptive practices. American Journal of Public Health, 1971, 61, 4, 730-738.

Gadpaille, W. Adolescent sexuality: A challenge to psychiatrists. Journal of American Academy of Psychoanalysis, 1975, 3, 2, 163-177.

_____. Is there a "too soon?" Today's Health, February, 1970, 48, 2, 34-35.

Garris, O., Steckler, A., and McIntire, J. The relationship between oral contraceptives and adolescent sexual behavior. Journal of Sex Research, 1976, 12, 2, 135-146.

Gebhard, P. The acquisition of basic sex information. The Journal of Sex Research, 1977, 13, 3, 148-169.

Gispert, M., and Falk, R. Adolescent sexual activity: Contraception and abortion. American Journal of Obstetrics and Gynecology, 1978, 132, 6, 620-628.

Goldfarb, J., Mumford, D., Schum, D., Smith, P., Flowers, C., and Schum, C. An attempt to detect pregnancy susceptibility in indigent adolescent girls. Journal of Youth and Adolescence, 1977, 6, 2, 127-143.

Goldstein, B. Human sexuality. New York: McGraw-Hill, 1976.

Goldsmith, S., Gabrielson, M., Gabrielson, I., Mathews, V., and Potts, L. Teenagers, sex, and contraception. Family Planning Perspectives, 1972, 4, 1, 32-38.

Gordon, S. What place does sex education have in the schools? Journal Health, 1974, 44, 4, 186-188.

_____. Counselors and changing sexual values. Personnel and Guidance Journal, 1976, 54, 362-364.

Gordon, S., and Libby, R. Sexuality today and tomorrow: Contemporary issues in human sexuality. North Scituate, Mass.: Duxbury Press, 1976.

Grady, B. A family living course. Children Today, 1973, 2, 4, 18-19, 36.

Group for the Advancement of Psychiatry. Normal adolescence. New York: Scribners, 1968.

Gross, R. Seven new cardinal principles. Phi Delta Kappan, 1978, 59, 4, 291-293.

Gustavus, S., and Huether, C. Population education in U.S. schools. A status report. Family Planning Perspectives, 1975, 7, 5, 203-207.

Hall, G. Adolescence: Its psychology and its relations to physiology, anthropology, sociology, sex, crime, religion, and education, Vol. 1. Englewood Cliffs, New Jersey: Prentice-Hall, 1905.

_____. Adolescence. 2 Vols. New York: Appleton-Century-Crofts, 1916.

Hampe, G., and Puppel, H. The measurement of premarital sexual permissiveness: A comparison of two Guttman scales. Journal of Marriage and the Family, 1974, 36, 451-463.

Harnett, A. How we do it. Journal of School Health, 1972, 42, 8, 487-490.

Hatcher, R., Stewart, G., Stewart, F., Guest, F., Stratton, P., and Wright, A. Contraceptive technology, 1978-1979, (9th ed.). New York: Irvington Publishers, 1978.

Hatcher, S. The adolescent experience of pregnancy and abortion: A development analysis. Journal of Youth and Adolescents, 1973, 2, 1, 53-102.

Havighurst, R. Developmental tasks and education. New York: David McKay, 1973.

Helmstadter, G. Principles of psychological measurement. New York: Appleton-Century-Crofts, 1964.

Hendrixson, L. Pregnant children: A socio-educational challenge. Phi Delta Kappan, 1979, 60, 9, 663-666.

Hertz, D. Psychological implication of adolescent pregnancy: Patterns of family interaction in adolescent mothers-to-be. Psychosomatics, 1977, 28, 1, 13-16.

Hopkins, J. Sexual behavior in adolescents. Journal of Social Issues, 1977, 33, 2, 67-85.

Howard, P. Pregnant school age girls. Journal of School Health, 1971, 41, 7, 361-364.

Hunt, M. Sexual behavior in the 1970's. Chicago, Ill.: Playboy Press, 1974.

Inhelder, B., and Piaget, J. The growth of logical thinking from childhood to adolescence. New York: Basic Books, 1958.

Institute for Social Research. Interviewers manual (rev. ed.). Ann Arbor, Mich.: Survey Research Center Institute for Social Research, 1976.

Jacobson, S. Sex education--a community project. Journal of Research and Development in Education, 1976, 10, 1, 23-29.

Jaffee, F., and Dryfoos, J. Fertility control services for adolescents: Access and utilization. Family Planning Perspectives, 1976, 8, 4, 167-175.

Jazwinski, C., and Byrne, D. The effect of a contraceptive theme in response to erotica. Motivation and Emotion, 1978, 2, 287-297.

Jekel, J., Harrison, J., Bancroft, D., Tyler, M., and Klerman, L. A comparison of the health index and subsequent babies born to school age mothers. American Journal of Public Health, 1975, 65, 4, 370-374.

Jessor, S., and Jessor, R. Transition from virginity to non-virginity among youth: A social-psychological study over time. Developmental Psychology, 1975, 11, 4, 473-478.

Joesting, J., and Joesting, R. Correlation among women's views of contraception, anxiety, creativity, and equalitarianism measures. Journal of Psychology, 1974, 86, 49-51.

Johnson, C. Adolescent pregnancy: Intervention into the poverty cycle. Adolescence, 1974, 9, 3, 391-401.

_____. Attitudes toward premarital sex and family planning for single-never-pregnant teenage girls. Adolescence, 1974, 9, 34, 255-272.

Juhasz, A. Characteristics essential to teachers in sex education. Journal of School Health, 1970, 40, 1, 17-19.

Juhasz, A. Understanding adolescent sexual behavior in a changing society. Journal of School Health, 1972, 42, 3, 149-154.

_____. The unmarried adolescent parent. Adolescence, 1974, 9, 3, 263-272.

_____. A chain of sexual decision-making. Family Coordinator, 1975, 24, 1, 43-50.

Jurich, A., and Jurich, J. The effect of cognitive moral development upon the selection of premarital sexual standards. Journal of Marriage and the Family, 1974, 36, 4, 736-741.

Kaats, G., and Davis, K. The dynamics of sexual behavior of college students. Journal of Marriage and the Family, 1970, 32, 3, 390-399.

Kahn, R., and Cannell, C. The dynamics of interviewing. New York: John Wiley, 1957.

Kane, F., and Lauchenbruch, P. Adolescent pregnancy: A study of aborters and non-aborters. American Journal of Orthopsychiatry, 1973, 43, 5, 796-803.

Kane, F., Lauchenbruch, P., Lokey, L., Chafetz, N., Suman, R., Pocuis, L., and Lipton, M. Motivational factors affecting contraceptive use. American Journal of Obstetrics and Gynecology, August, 1971, 1050-1054.

Kantner, J., and Zelnik, M. Sexual experience of young unmarried women in the United States. Family Planning Perspectives, 1972, 4, 4, 9-18.

_____. Contraception and pregnancy: Experience of young unmarried women in the United States. Family Planning Perspectives, 1973, 5, 1, 21-35.

Kaplan, H. The new sex therapy. New York: Quadrangle/The New York Times Book Co., 1974.

Kastenbaum, R. Humans developing: A lifespan perspective. Boston: Allyn & Bacon, 1979.

Keniston, K. The uncommitted: Alienated youth in American society. New York: Dell, 1960.

_____. The sources of student dissent. Journal of Social Issues, 1967, 22, 108-137.

_____. Young radicals: Notes on committed youth. New York: Harcourt, 1968.

Kennedy, E. Introduction to S. 2538, the National and School-age Mother and Child Health Act of 1975. Congressional Record, October 21, 1975, 121, 154, 1-4.

Kinsey, A., Pomeroy, W., and Martin, C. Sexual behavior in the human male. Philadelphia: Saunders, 1948.

Kinsey, A., Pomeroy, W., Martin, C., and Gebhard, P. Sexual behavior in the human female. Philadelphia: Saunders, 1953.

Kirkendall, L. Premarital intercourse and interpersonal relationships. New York: Julian Press, 1961.

_____. Characteristics of sexual decision-making. Journal of Sex Research, 1967, 3, 3, 201-211.

_____. A bill of sexual rights and responsibilities. Humanist, 1976, 36, 1, 4-6.

Kleinerman, G., Grossman, M., Breslow, J., and Goldman, R. Sex education in a ghetto school. The Journal of School Health, 1971, 41, 1, 29-33.

Klerman, L., Jekel, J., Currie, J., Gabrielson, I., and Sarrel, P. The evolution of an evaluation: Methodological problems for school age mothers. American Journal of Public Health, 1973, 63, 12, 1040-1047.

Klerman, L. Adolescent pregnancy: The need for new policies and new programs. The Journal of School Health, 1975, 45, 5, 263-267.

Kohlberg, L. Continuities and discontinuities in childhood and adult moral development revisited. In Baltes, P. and Schaie, K. (Eds.), Life-span developmental psychology: Personality and socialization. New York: Academic Press, 1973, 180-207.

_____. Development of moral character and moral ideology. In Hoffman, L. and Hoffman, M. (Eds.), Research (Vol. 1). New York: Russell Sage Foundation, 1964, 383-431.

_____. Moral development and the education of adolescents. In Ellis, E. D. (Ed.), Adolescents: Readings in behavior and development. New York: Holt, Rinehart & Winston, 1970, 178-196.

_____. Stage and sequence: The cognitive-developmental approach to socialization. In Goslin, D. (Ed.), Handbook of socialization theory and research. Chicago: Rand McNally, 1969.

Kohlberg, L., and Gilligan, C. The adolescent as a philosopher: The discovery of self in a post conventional world. In Kagan, J. (Ed.), Twelve to sixteen. Toronto: George J. McLead, Ltd., 1977, 144-179.

Kohlberg, L., and Turiel, E. (Eds.). Recent research in moral development. New York: Holt, Rinehart & Winston, 1974.

LaBarre, M. Pregnancy experiences among married adolescents. American Journal of Orthopsychiatry, 1968, 31, 1.

Ladner, J. A. Tomorrow's tomorrow: The black woman. Garden City, New Jersey: Doubleday & Co., 1971.

Lane, M. Contraception for adolescents. Family Planning Perspectives, 1973, 5, 1, 19-20.

Lane, M., and Sobrero, A. Experience with intrauterine contraception by adolescent women. Mount Sinai Journal of Medicine, 1975, 42, 4, 337-344.

Lee, M. Background factors related to sex information and attitudes. Journal of Educational Psychology, 1952, 43, 467-485.

Lewis, R. Parents and peers: Socialization agents in the coital behavior of young adults. The Journal of Sex Research, 1963, 9, 2, 156-170.

Libby, R. Parental attitudes toward high school sex education programs. Family Coordinator, 1970, 19, 3, 234-247.

_____. Parental attitudes toward content in high school sex education programs; Liberalism-traditionalism and demographic correlates. Family Coordinator, 1971, 21, 22, 127-136.

_____. Adolescent sexual attitudes and behavior. Journal of Clinical Child Psychology, 1974, 3, 36-42.

Libby, R., Acock, A., and Payne, D. Configurations of parental preferences concerning sources of sex education for adolescents. Adolescence, 1974, 9, 33, 73-80.

Libby, R., and Nass, G. Parental views on teenage sexual behavior. The Journal of Sex Research, 1971, 7, 3, 226-236.

Libby, R., and Potter, J. Who should plan your sex education program? American School Board Journal, 1969, 157, 19-23.

Lieberman, B. Human sexual behavior: A book of readings. New York: John Wiley & Sons, 1971.

Lindemann, C. Birth control and unmarried young women. New York: Springer Publishing Co., 1974.

Lorenzi, M., Klerman, L., and Jekel, J. School age parents: How permanent a relationship? Adolescence, 1977, 12, 45, 13-22.

Mackey, B., and Milloy, M. The impact of teenage pregnancy on the professional educator. The Family Coordinator, 1974, 23, 1, 15-18.

Maddock, J. Sex in adolescence: Its meaning and its future. Adolescence, 1973, 8, 31, 325-342.

Manaster, G. Adolescent development and the life tasks. Boston: Allyn & Bacon, 1977.

Maranell, G., Dodder, R., and Mitchell, D. Social class and premarital sexual permissiveness: A subsequent test. Journal of Marriage and the Family, 1970, 32, 2, 85-88.

Marin, P. The open truth and fiery vehemence of youth. In Gross, R. and Osterman, P. (Eds.), High School. New York: Simon & Schuster, 1971.

Martinson, F. Sexual knowledge, values and behavior patterns of adolescents. Child Welfare, 1968, 47, 7, 405-410.

Mason, R. Family life education in schools of Kentucky. Family Coordinator, 1974, 23, 2.

Masters, W., and Johnson, V. Human sexual response. Boston, Mass.: Little, Brown & Co., 1969.

_____. Human sexual inadequacy. Boston, Mass.: Little, Brown & Co., 1969.

_____. Interdisciplinary approach to sexuality. Personnel and Guidance Journal, 1976, 54, 368-370.

Maxwell, S., Hayes, G., and Martinez, A. Reaching rural adolescents with programs in sexuality. Personnel and Guidance Journal, 1976, 54, 387-388.

May, R. Love and will. New York: Norton, 1969.

McAnarney, E. Adolescent pregnancy: A national priority. American Journal of Diseases of Children, 1978, 132, 2, 125-126.

McNab, W. Sexual attitude development in children and the parents' role. Journal of School Health, 1976, 46, 9, 537-541.

Mendelsohn, R. Sex development and adolescence. Counseling and Values, 1973, 17, 4, 222.

Menken, J. The health and social consequences of teenage childbearing. Family Planning Perspectives, 1972, 4, 3, 45-53.

Metropolitan Life. Recent growth trends in childhood and adolescence. Statistical Bulletin, 1973, 54, 8-9.

Middendorp, C., Brinkman, W., and Koomin, W. Determinants of premarital sexual permissiveness: A secondary analysis. Journal of Marriage and the Family, 1970, 32, 8, 369-379.

Miller, P., and Simon, W. Adolescent sexual behavior: Context and change. Social Problems, 1974, 22, 1, 58-77.

Miller, R. Making decisions about children. In Economic issues for children, (2nd Ed.). New York: West Publishing Co., 1978, 96-100.

Miller, W. Sexuality, contraception and pregnancy in a high school population. California Medicine, 1973, 119, 14-21.

Mirande, A. Reference group theory and adolescent sexual behavior. Journal of Marriage and the Family, 1968, 30, 4, 572-577.

Money, J. Judging teenage mores. The Journal of Sex Research, 1966, 2, 1, 41-42.

Money, J., and Ehrhardt, A. Man and woman, boy and girl. Baltimore, Maryland: John Hopkins University Press, 1972.

Money, J., and Tucker, P. Sexual signatures on being a man or a woman. Boston, Mass.: Little, Brown & Co., 1975.

Moore, K. Teenage childbirth and welfare dependency. Family Planning Perspectives, 1978, 10, 4, 233-235.

Moore, K., and Caldwell, S. The effect of government policies on out-of-wedlock sex and pregnancy. Family Planning Perspectives, 1977, 9, 4, 164-169.

Moore, K., and Waite, L. Early childbearing and educational attainment. Family Planning Perspectives, 1977, 9, 5, 220-225.

Morris, L. Estimating the need for family planning services among unwed teenagers. Family Planning Perspectives, 1974, 6, 2, 91-97.

Morris, N., Udry, J., and Chasee, C. Reduction of low birth weight and rates by prevention of unwanted pregnancies. American Journal of Public Health, 1973, 63, 11, 935-938.

Mosse, H. The influence of mass media on the sex problems of teenagers. The Journal of Sex Research, 1966, 2, 1, 27-35.

Mussen, P., Conger, J., and Kagan, J. Child development and personality, fifth edition. New York: Harper & Row, 1979.

Nunnally, J. Educational measurement and evaluation. New York: McGraw-Hill, 1972.

Offer, D., and Offer, J. The psychological world of the teenager. New York: Basic Books, 1969.

Opler, M. Adolescence in cross cultural perspective. In Howells, J. (Ed.), Modern perspectives in adolescent psychiatry. New York: Brunner/Mazel, Inc., 1971, 152-179.

Oppenheim, A. Questionnaire design and attitude measurement. New York: Basic Books, 1966.

Osofsky, H. Teenage pregnancy: Some preventive considerations. Adolescence, 1970, 5, 18, 151-169.

Osofsky, H., Osofsky, J., Kendall, N., and Rajan, R. Adolescents as mothers: An interdisciplinary approach to a complex problem. Journal of Youth and Adolescence, 1973, 2, 3, 233-249.

Page, R., Werry, J., and Hunton, R. Sexual activity and contraception use in young adults. New Zealand Medical Journal, October, 1975, 261-264.

Patterson, C. Piaget: The origins and development of intellect. In Foundations for a theory of instruction and educational psychology. New York: Harper & Row, 1977, 65-129.

Paul, E., and Scofield, G. Informed consent for fertility control services. Family Planning Perspectives, 1979, 11, 3, 159.

Perlman, D. Self-esteem and sexual permissiveness. Journal of Marriage and the Family, 1974, 36, 8, 470-473.

Perretti, P. Premarital and sexual behavior between females and males of two middlesized midwestern cities. The Journal of Sex Research, 1969, 5, 3, 218-225.

Perretti, P., Carter, R., and McClinton, B. Graffiti and adolescent personality. Adolescence, 1977, 12, 45, 31-42.

Phillips, C. Illegitimacy in the United States: 1920-1968. In Westoff, C. and Parke, R., Jr. (Eds.), Demographic and social aspects of population (Vol. 1). Washington, D. C., 1969.

Piaget, J. The construction of reality in the child. New York: Basic Books, 1954.

Piaget, J., and Inhelder, B. The psychology of the child. New York: Basic Books, 1969.

Pietrofesa, J., and Pietrofesa, D. Human sexuality in the schools. Journal of Research and Development in Education, 1976, 10, 1, 5-12.

_____. School counselor sex education. Personnel and Guidance Journal, 1976, 54, 358-361.

Plionis, B. Adolescent pregnancy: Review of the literature. Social Work, 1975, 20, 4, 302-307.

Pohlman, E. The psychology of birth planning. Cambridge, Mass.: Schenkman Publishing Co., 1969.

Poole, C. Contraception and the adolescent female. Journal of School Health, 1976, 46, 8, 475-479.

Pope, H. Unwed mothers and their sex partners. Journal of Marriage and the Family, 1967, 29, 3, 555-567.

Poveda, T. A perspective on adolescent social relations. Psychiatry, 1972, 35, 1, 32-47.

Potter, S., and Smith, H. Sex education as viewed by teenaged unwed mothers. Intellect, 1976, 104, 2374, 515-516.

Powell, J. The secret of staying in love. Niles, Ill.: Argus Communications, 1974.

Presser, H. Early motherhood: Ignorance or bliss? Family Planning Perspectives, 1974, 6, 1, 8-14.

Prystowsky, H., Burgess, P., and Held, B. Research in delivery of female health care. American Journal of Obstetrics and Gynecology, 1971, 110, 8, 1055-1060.

Rainwater, L. Sexual behavior and family planning in the lower class. In Vincent, C. (Ed.), Human sexuality in medical education and practice. Springfield, Illinois: Charles C. Thomas, 1968, 348-366.

_____. Behind ghetto walls: Black families in a federal slum. Chicago: Aldine Publishing Company, 1970.

Ramsey, G. V. The sexual development of boys. American Journal of Psychology, 1943, 56, 217-233.

Rauh, J., Burket, R., and Brookman, R. Contraception for teenagers. Medical Clinics of North America, 1975, 59, 6, 1407-1427.

Reich, C. The greening of America. New York: Random House, 1970.

Reichelt, P., and Werley, H. Contraception, abortion, and venereal disease: Teenagers' knowledge and the effect of education. Family Planning Perspectives, 1975, 7, 2, 83-88.

Reiss, I. Premarital sexual permissiveness among Negroes and Whites. American Sociological Review, 1964, 29, 5, 688-698.

_____. Social class and premarital sexual permissiveness: A re-examination. American Sociological Review, 1965, 30, 747-756.

Reiss, I. Contraception information and sexual morality. Journal of Sex Research, 1966, 2, 1, 51-57.

Reiss, I., Banwart, A., and Foreman, H. Premarital contraceptive usage: A study and some theoretical implications. Journal of Marriage and the Family, 1975, 37, 3, 619-630.

Reiss, I. The effect of changing trends, attitudes, and values on premarital sexual behavior. In Gordon, S. and Libby, R. (Eds.), Sexuality: Today and tomorrow. North Scituate, Mass.: Duxbury Press, 1976.

Reiter, E., and Root, A. Hormonal changes of adolescence. Medical Clinics of North America, 1975, 59, 6, 1289-1317.

Robinson, P. The modernization of sex. New York: Harper & Row, 1977.

Roebuck, J., and McGee, M. Attitudes toward premarital sex and sexual behavior among black high school girls. The Journal of Sex Research, 1977, 13, 2, 104-114.

Rosenberg, P., and Rosenberg, L. Sex education for adolescents and their families. Journal of Sex and Marital Therapy, 1976, 2, 1, 53-67.

Rosner, A. How we do it. The Journal of School Health, 1977, 47, 2, 118-121.

Ross, H., and Sawhill, I. Times of transition: The growth of families headed by women. Washington, D. C.: The Urban Institute, 1975.

Roszak, T. The making of a counterculture. New York: Viking, 1969.

Rubenstein, J., Watson, F., Drolette, M., and Rubenstein, H. Young adolescents' sexual interests. Adolescence, 1976, 11, 44, 487-496.

Rubenstein, J., Watson, F., and Rubenstein, H. An analysis of sex education books for adolescents by means of adolescents' sexual interests. Adolescence, 1977, 12, 47, 293-310.

Ryan, S. Attitudes of ninth grade students and their parents toward sex education in the home economics curriculum in Okaloosa County. Unpublished thesis, Florida State University, 1978.

Sarrel, P., and Davis, C. The young unwed primipara. American Journal of Obstetrics and Gynecology, 1966, 95, 5, 722-725.

Sarrel, P., and Klerman, L. The young unwed mother. American Journal of Obstetrics and Gynecology, 1969, 105, 4, 575-578.

Sauber, M., and Corrigan, E. The six year experience of unwed mothers as parents. New York: Community Council of Greater New York, 1970.

Scales, P. Males and morals: Teenage contraceptive behavior amid the double standard. The Family Coordinator, 1977, 26, 3, 211-222.

Scales, P., Etelis, R., and Le[illegible], N. Male involvement in contraceptive decision-making: The role of birth control counselors. Journal of Community Health, 1977, 3, 1, 54-60.

Schinke, S., and Gilchrist, L. Adolescent pregnancy: An interpersonal skill training approach to intervention. Social Work in Health Care, 1977, 3, 2, 159-174.

Schinke, S., Gilchrist, L., and Small, R. Preventing unwanted adolescent pregnancy: A cognitive-behavioral approach. American Journal of Orthopsychiatry, 1979, 49, 1, 8, 81-88.

Schoof-Tams, T., Schlagel, J., and Walczak, L. Differentiation of sexual morality between 11 and 16 years. Archives of Sexual Behavior, 1976, 5, 5, 253-270.

Schulz, D. Coming up black. Englewood Cliffs, N. J.: Prentice-Hall, 1969.

Schwartz, S. The effects of guilt and sexual arousal on the retention of birth control information. Journal of Counseling and Clinical Psychology, 1973, 41, 1, 61-64.

Settlage, D., Baroff, S., and Cooper, D. Sexual experience of younger teenage girls seeking contraceptive assistance for the first time. Family Planning Perspectives, 1973, 5, 4, 223-226.

Shah, F., Zelnik, M., and Kantner, J. Unprotected intercourse among unwed teenagers. Family Planning Perspectives, 1975, 7, 1, 39-44.

Shane, H., and Shane, J. Future planning and the curriculum. Phi Delta Kappan, 1968, 49, 7, 372-377.

Shelton, J. Very young adolescent women in Georgia: Has abortion or contraception lowered their fertility? American Journal of Public Health, 1977, 67, 7, 616-620.

Siegel, J. Why teach family planning? Family Coordinator, 1969, 18, 4, 371-374.

Sigusch, V., and Schmidt, G. Teenage boys and girls in West Germany. Journal of Sex Research, 1973, 9, 2, 107-123.

Skipper, J., Jr., and Nass, G. Dating behavior: A framework for analysis and an illustration. Journal of Marriage and the Family, 1966, 28, 412-420.

Smith, E. The role of the grandmother in adolescent pregnancy and parenting. Journal of School Health, 1975, 45, 5, 278-282.

Sorensen, R. Adolescent sexuality in contemporary America: Personal values and sexual behavior, ages 13-19. New York: Harry N. Abrams, Inc., 1973.

Spanier, G. Sexualization and premarital sexual behavior. The Family Coordinator, 1972, 24, 1, 33-41.

Spindler, G. Education in transforming American culture. Harvard Educational Review, 1965, 35, 2, 145-166.

Spock, B. Raising children in a difficult time. New York: Norton, 1974.

Steinmann, A., and Jurich, A. The effects of a sex education course on the sex role perceptions of junior high school students. The Family Coordinator, 1975, 24, 1, 27-31.

Stern, M., and MacKenzie, R. Venereal disease in adolescents. Medical Clinics in North America, 1975, 59, 6, 1395-1405.

Stokes, W. Should mothers inform their teenage daughters on contraceptives? The Journal of Sex Research, 1966, 2, 1, 59.

Tanner, J. Sequence, tempo, and individual variation in the growth and development of boys and girls aged 12 to 16. Daedalus, 1971, 100, 907-930.

Teevan, J. Reference groups and premarital sexual behavior. Journal of Marriage and the Family, 1972, 34, 2, 283-291.

Thornburg, H. Age and first sources of sex information as reported by 88 college women. Journal of School Health, 1970, 40, 21, 156-158.

_____. A comparative study of sex information sources. The Journal of School Health, 1972, 42, 2, 88-91

_____. Educating the preadolescent about sex. The Family Coordinator, 1974, 23, 1, 35-37.

_____. Learning and maturation in middle school age youth. The Clearing House, 1970, 45, 3, 150-155.

Tietze, C. Teenage pregnancies: Looking ahead to 1984. Family Planning Perspectives, 1978, 10, 4, 205-207.

Toffler, A. Future shock. New York: Random House, 1970.

Torres, A. Does mother know? Family Planning Perspectives, 1978, 10, 5, 280-282.

Trussell, T. Economic consequences of teenage childbearing. Family Planning Perspectives, 1976, 8, 4, 184-190.

Trussell, T., and Menken, J. Early childbearing and subsequent fertility. Family Planning Perspectives, 1978, 10, 4, 209-218.

Turner, C., and Darity, W. Fears of genocide among black Americans as related to age, sex, and region. American Journal of Public Health, 1973, 63, 12, 1029-1034.

U.S. Department of Health, Education and Welfare, National Center for Health Statistics. Selected vital and health statistics in poverty and nonpoverty areas of 19 large cities: U.S. 1969-1971. Vital and Health Statistics, Series 21, No. 16. Washington, D. C.: U.S. Government Printing Office, November, 1975.

Vadies, E., and Hale, D. Attitudes of adolescent males toward abortion, contraception, and sexuality. Social Work in Health Care, 1977, 3, 2, 169-174.

Vener, A., and Stewart, C. America revisited: 1970-1973. Journal of Marriage and the Family, 1974, 36, 4, 728-735.

Vener, A., Stewart, C., and Hager, D. The sexual behavior of adolescents in middle America: Generational and American-British comparisons. Journal of Marriage and the Family, 1972, 34, 96-105.

Vincent, C. Unmarried mothers. London, England: Free Press, 1961.

Vincent, C., Haney, A., and Cochrane, C. Familial and generational patterns of illegitimacy. Journal of Marriage and the Family, 1969, 31, 4, 659-667.

Walters, J. Birth defects and adolescent pregnancies. Journal of Home Economics, 1975, 67, 6, 23-27.

Welbourne, A. A community sex information service. Personnel and Guidance Journal, 1976, 54, 384-386.

Wiersma, W. Research methods in education (2nd ed.). Itasca, Ill.: F. E. Peacock, 1975.

Wilson, R. Problem pregnancy and abortion counseling. Saluda, North Carolina: Family Life Publications, 1973.

Wolfish, M. Adolescent sexuality: Counseling, contraception, and pregnancy. Clinical Pediatrics, 1973, 12, 4, 244-247.

Wollman, L. Brief statistics on female adolescents. The Journal of Sex Research, 1966, 2, 1, 25-26.

Yarber, W. New directions in venereal disease education. The Family Coordinator, 1978, 27, 2.

Youngs, D., and Niebyl, J. Adolescent pregnancy and abortion. Medical Clinics of North America, 1975, 59, 6, 1419-1427.

Zelnik, M., and Kantner, J. The probability of premarital intercourse. Social Science Research, 1972, 1, 3, 335-341.

_____. The resolution of teenager first pregnancies. Family Planning Perspectives, 1974, 6, 2, 74-80.

_____. Attitudes of American teenagers toward abortion. Family Planning Perspectives, 1975, 7, 2, 89-91.

_____. Sexual and contraceptive experiences of young unmarried women in the United States, 1968-1971. Family Planning Perspectives, 1977, 9, 2, 55-73.

_____. First pregnancies of women aged 15 to 19: 1976 and 1971. Family Planning Perspectives, 1978a, 10, 1, 11-19.

_____. Contraceptive patterns and premarital pregnancy among women aged 15 to 19 in 1976. Family Planning Perspectives, 1978b, 10, 3, 135-142.

Zelnik, M., Kim, Y., and Kantner, J. Probabilities of intercourse and conception among U.S. teenage women: 1971 and 1976. Family Planning Perspectives, 1979, 11, 3, 177-183.

Zongker, C. The self concept of pregnant adolescent girls. Adolescence, 1977, 12, 48, 477-488.

Zubin, J., and Money, J. Contemporary sexual behavior: Critical issues in the 1970's. Baltimore: John Hopkins University Press, 1973.

ABSTRACT

This research is directed toward an interdisciplinary education effort aimed at prevention of pregnancy among young adolescents. The following objectives are accomplished:

1. Identify factors associated with adolescent sexual behavior, contraceptive behavior, and pregnancy through a search of the literature.

2. Develop instructional objectives or skills associated with pregnancy prevention based on literature review.

3. Develop and validate a survey instrument, entitled Needs Assessment Inventory for Teenage Pregnancy Prevention, which measures approval of instructional objectives or skills for inclusion in an educational program for adolescents aged 13 to 15.

4. Determine approval for each objective or skill cited in the instrument.

5. Determine reaction to basic themes included in the inventory: Changing Bodies and Medical Concerns, Values Clarification, Decision-making, Family Relationships, Interpersonal Relationships, and Role Development.

The Needs Assessment Inventory for Teenage Pregnancy Prevention has sufficient support for use without modification. The literature search and interviews with adolescent women support the instrument content validity. Reliability scores are based on surveys of: (1) students and parents serving as members of a superintendent's advisory committee; (2) professionals working on problems of teenage pregnancy; and (3) Florida citizens selected randomly from nine of the largest cities. Reliability estimates based on surveyed groups range from .951 to .984 with an overall estimate of .977. All themes receive moderate approval except Interpersonal Relationships and Role Development which receive slight approval. All scores of the school advisory group are lower than scores of professionals and Florida citizens.

Needs assessment data generated can be used in several ways:

1. To assess parental or community approval of educational objectives associated with pregnancy prevention for use in public schools or private agencies.

2. To assess degrees of approval of objectives by responding groups identified by region, professional affiliation, socio-economic status, religious affiliation, age or sex.

3. To develop local or state pre-service and in-service education programs.

4. To develop curricula related to pregnancy prevention for young adolescents.

This public document was promulgated at an annual cost of $2,871.84 or $5.7437 to report the development of an instrument to measure community approval of educational objectives in middle school programs aimed at the prevention of pregnancy. UWF 39-9-79.

State of Florida
Department of Education
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